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GO: A Complete Introduction to the Game

by Cho Chikun, holder of the Kisei, Meijin, and Honinbo titles

Played throughout eastern Asia for thousands of years, Go has captured the imagination of more game players than any other strategy game. Today, Go is becoming increasingly popular in the western world as more and more people discover its beauty, elegance, and strategic depth.

This book is the best and most authorative introduction to this ancient and fascinating game. Written specifically for the western reader by one of the strongest players in the world, it presents the rules, tactics, and strategy of this unique game in a step-by-step, easy to understand way. Besides showing you how to play, it contains essays about the world of Go which will broaden your knowledge and understanding as well as pique your interest. From history to modern tournament play, from traditional playing sets to computer Go, you'll find it in these pages.

About the Author

Cho Chikun was born in Seoul, Korea in 1956. He came to Japan at the age of 6 and became the youngest-ever professional Go player at only 11. He is considered to be one of the great prodigies in the history of go. By the age of 27, he held the four top Japanese titles simultaneously, a feat that no other player has yet accomplished. At one time or another, he has held every one of the seven major titles, the Grand Slam of professional go. Presently, he is the undisputed king of the Japanese go world, holding the top three titles: Kisei, Meijin, and Honinbo.

Kiseido Publishing Company

Cho Chikun

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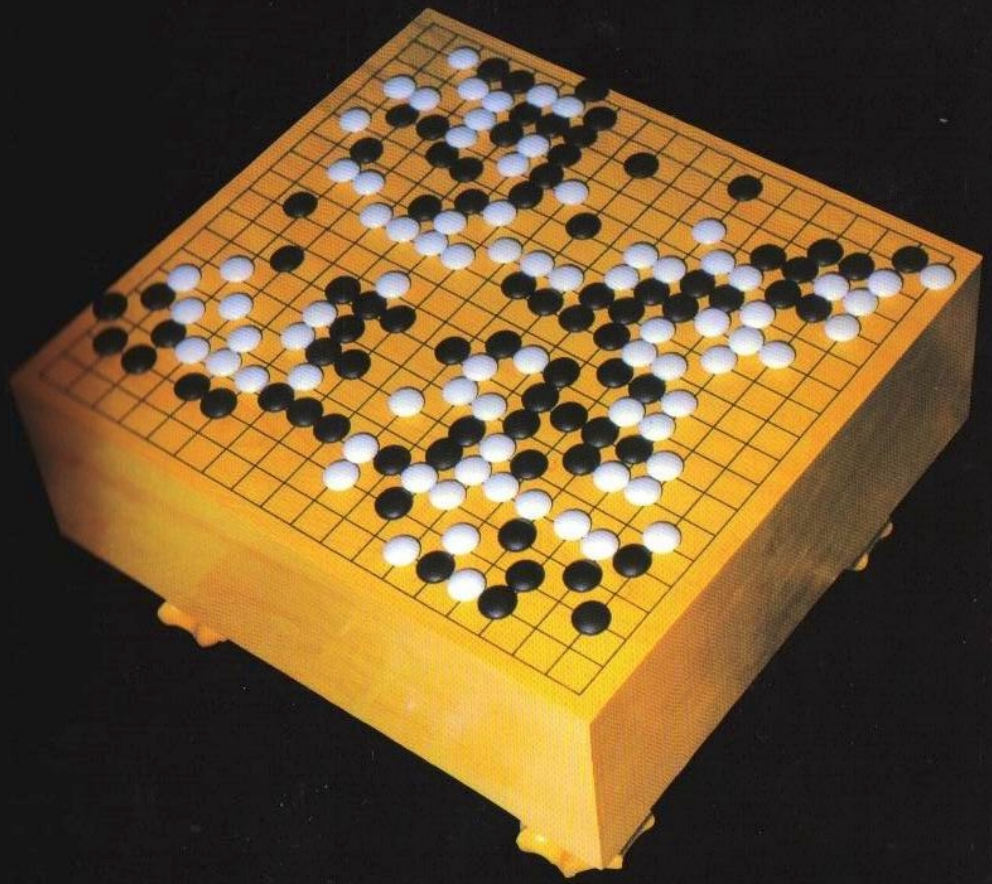
GO

A COMPLETE INTRODUCTION TO THE GAME



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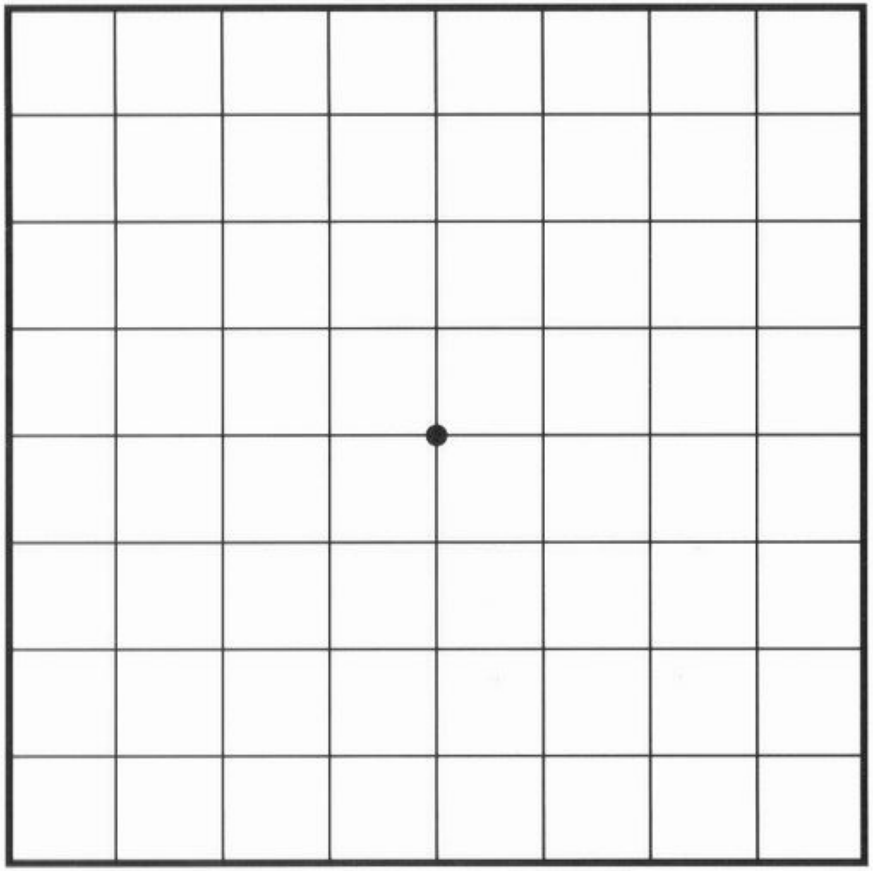

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A Complete Introduction to the Game

by Cho Chikuń

25th Honinbo

edited by Richard Bozulich

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About the Author

Cho Chikun was born in Seoul, Korea, on June 20, 1956. He is considered to be one of the great prodigies in the history of go. At the age of six he came to Japan and became a disciple of Kitani Minoru, 9-dan. In 1968, at the age of 11, he entered the professional ranks as a 1-dan, the youngest age anyone has ever attained that rank, and it took him only 12 more years to reach the top professional rank of 9-dan.

His first big tournament success came in 1975 when he won the 12th Professional Top Ten title. In 1980 he took the Meijin title and this was followed by a rapid succession of big title victories: the Meijin title in 1980, the Honinbo title in 1981, the Judan title in 1982, and the most prestigious title, the Kisei, in 1983. When he had captured the Kisei title, he held the four top titles at the same time, a feat no one else has ever accomplished. At one time or another, he has held every one of the seven major titles, the Grand Slam of professional go. Presently, he is the undisputed king of the Japanese go world holding the top three titles: Kisei, Meijin, and Honinbo.

Although he is a Korean citizen, he has made his professional career in Japan and is affiliated with the Japan Go Association. Among his hobbies are golf and swimming.

Preface

Go is an elegant game; its rules are few and simple. Yet much is made about how hard a game it is to learn. The problem, I believe, is in the presentation. Beginners who start out on the standard 19x19 board are bound to become awed by the enormous number of points there are to play on. But if they are introduced to go on a 9x9 board, the time it takes to learn the game can be greatly reduced.

With this in mind, I have tried to present the rules of go to the beginner in an easy-to-understand manner. Using four example games on a 9x9 board, I gradually introduce the rules and the method of counting the score. After finishing the first chapter, the reader will immediately grasp what go is all about. The rule of capture is covered in the second chapter. What constitutes a living group is explained in the third chapter, and the rule for ko is the subject of the fourth chapter. In the process of presenting these games, I have made sure that the method of counting the score is clearly illustrated.

The middle chapters are concerned with tactics, and chapters nine and ten introduce the reader to the strategy of go on the standard 19x19 board. These chapters will start to mean more to you as you gain experience from playing games. In the final chapter I present one of my own games in order to give you an idea of what a game of go is like at the highest level.

There are many go books in English for beginners. They concentrate mainly on the rules and tactics, but provide very little of the background and cultural milieu. On finishing such books the reader comes away with a lot of questions to which very few people in the West know answers. As a result, there is a lot of misinformation about go. I have tried to remedy this situation in the interludes between chapters where I cover the history of the game, the modern tournament scene, go in the West, as well as other topics.

Tokyo, September 1997
Cho Chikun

A game of go is symbolic of the gradual occupation of our planet by the human race. It's sides are the coasts, washed by oceans and seas. The corners can be compared to islands or peninsulas. Those parts having a greater coastline are more easily defended.
The central part of the map corresponds to the centre of continents where the inhabitants have no outlet to the sea. In the beginning, men were very few and the families or tribes had all the territory they desired without need for offensive or defensive action. They lived in a state of nature. But with the multiplication of human beings began the first struggles for the appropriation of the best places along the rivers and sea coasts. As the game develops and bases have been consolidated, advance to the interior is begun. The occupation of this territory is rendered permanent by the formation of live masses.
When the war ends peace treaties are made. All territories on the map are occupied. In one place we find large or small masses that have definitely won their territory, in another, masses living side by side respecting the rights of their neighbours whom they can never hope to dislodge.
We have not arrived, in our world, at the state of finality achieved at the end of a game of go.
From *The Game of Wei-Chi*, by Count Daniele Pecorini and Tong Shu. (Published in 1929.)

Generally speaking, when counting all things, one begins with the number one. There are on the go board, three hundred and sixty intersections plus one. The number one is supreme and gives rise to the other numbers because it occupies the ultimate position and governs the four quarters. Three hundred and sixty represents the number of days in the [lunar] year. The division of the go board into four quarters symbolizes the four seasons. The seventy-two points on the circumference represent the [five-day] weeks of the [Chinese lunar] calendar. The balance of yin and yang is the model for the equal division of the three hundred and sixty stones into black and white.
From *The Classic of Go*, by Chang Ni. (Published between 1049 and 1054.)

Introduction

Go is the oldest and one of the most popular strategic board games in the world. It has been played throughout the Orient for thousands of years. In Japan alone, 10,000,000 people play go and nearly 400 professionals make their living by teaching the game and competing in tournaments that offer millions of dollars in prize money.

Go is an easy game to learn. You can master the rules in a few minutes; however, you can devote a lifetime to exploring its depths and subtleties.

Go starts with the simplest elements — line and circle, black and white — but it builds into deep and complex structures. It is a game played on a grand scale, involving not a single battle but a series — an entire war, in fact.

In the abstract, go is in the same category as the West's most fascinating board game, chess. Both require high-level strategic thinking and provide players with many opportunities to exercise their tactical skills. Both are challenging, intellectually stimulating, and inexhaustibly interesting for millions of people of all ages all over the world.

But the similarities end there. Go starts with an empty board, chess with a full one. The object of a go game is to surround more territory than your opponent; of a chess game, to capture your opponent's king. Go stones all have the same value; chessmen have different values. A satisfying game of go can be played quickly on a board as small as 7x7 lines, or over the course of a few hours or even days on the standard 19x19-line board; chess requires its standard complement of 32 pieces and a 64-square board.

Most, if not all, of the moves of a go game remain on the board until the game ends, providing its players with continuously developing shapes and patterns of black and white stones; the beauty of a chess game's moves is more ephemeral and kaleidoscopic as its patterns change with each move and capture. And, finally, go has a handicap system that allows players of quite different strengths to compete on an equal basis: the weaker player is given additional stones at the beginning of the game. Chess handicaps the stronger player by forcing him to remove one or more of his pieces at the beginning, which distorts the nature of the game.

Which is the better game, the more interesting game, is, of course, impossible to say. It is both of interest and of significance, however, to note that many professional go players are also avid and usually strong shogi (Japanese chess) players. Conversely, many professional shogi players are usually strong go players. It is fair to say that if you like to practice and sharpen your tactical skills, if you like to play chess, chances are excellent that you will also like to play go.

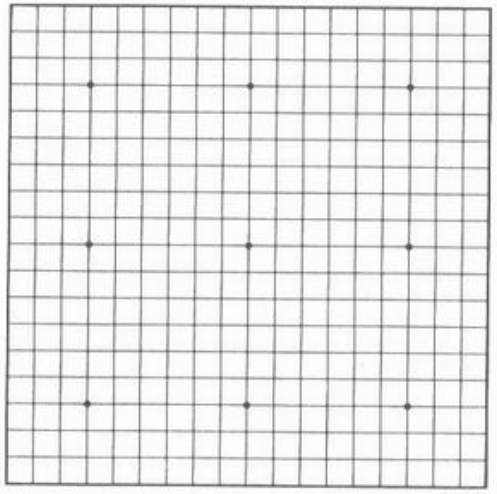
To some players go is a model for living. Its strategic concepts serve them as models for decision making in their everyday lives. Some of the more familiar maxims that are played out and illustrated in nearly every game are: 'Don't put all your eggs in one basket,' 'Don't burn your bridges behind you,' 'Look before you leap,' 'Don't bang your head against a stone wall,' and 'Don't throw good money after bad.'

But however you choose to see go — as a model for living, as an alternative to chess and the other board games you enjoy, or as that elusive bit of variety that's been missing from the spice in your life — it is bound to be a welcome addition to your social and intellectual repertoire.

Chapter One
Introducing the Game

The Board and Stones

Go is usually played on a 19x19 grid called a board. *Dia. 1* shows the empty board. Notice the nine marked points. These points are usually referred to as the star-points. They serve as points of reference, as well as markers on which stones are placed in handicap games.

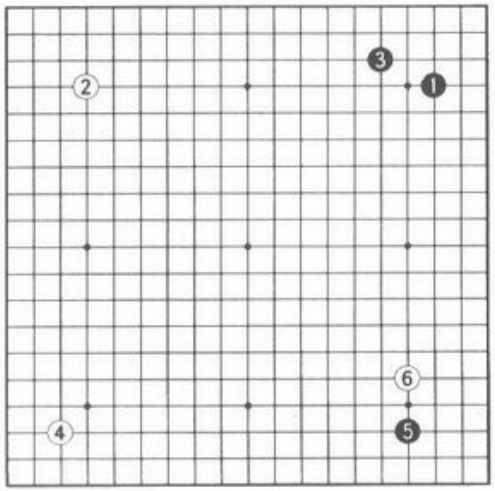


Dia. 1

The pieces used are black and white lens-shaped disks called stones. They are usually made of plastic or glass; in more expensive sets, the white stones are made from clam shells and the black of slate. No matter what materials they are made of, they are referred to simply as 'stones'. Black starts out with 181 stones and White with 180. The total of 361 stones corresponds to the number of intersections on the standard 19x19 go board. It is customary to keep the stones that have not yet been played in wooden bowls next to the board on your right.

How the Game is Played

At the beginning of the game the board is empty. One player takes the black stones, the other player the white stones. The player with the black stones makes the first move by placing a stone on an intersection. He may play on any unoccupied intersection, but it is usual to make the initial moves of the game near the corner star-points. Once a stone is played, it does not move unless it is captured and taken off the board. *Dia.* 2 shows a typical opening. Black makes his first move at 1 in the upper right corner, then White makes his first move at 2 in the upper left corner. Thereafter, both sides alternate in making their moves. Notice that in the opening neither side strays very far from the corners.

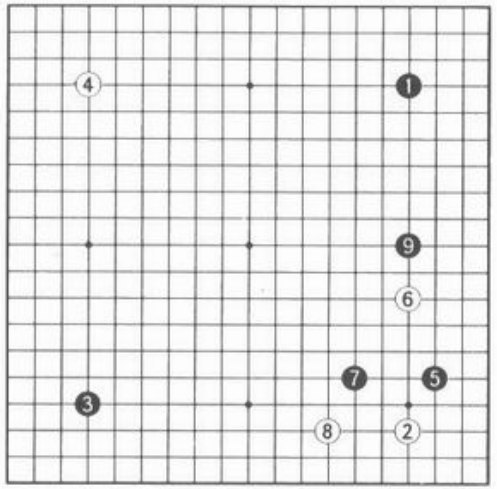


Dia. 2

Four Basic Rules

1. Moves are played on the intersections.
2. The stones do not move after being played.
3. Black plays first.
4. Black and White alternate in making their moves.

Diagram 3 shows the beginning of another game. After Black 5, White plays a move on the side with 6, and Black jumps out into the center with 7. This opening is typical of how a game of go proceeds: each side establishes a presence in a corner, play then spreads along the sides, and eventually the positions develop into the center.



Dia. 3

The Object of Go is to Control Territory

The object of go is to take control of territory. At the end of the game, the side which controls more territory wins the game.

On the next two pages, we are going to show you how territory is taken in a game on a 9x9 board. Although a game on a 9x9 board is not as complicated strategically as one on a 19x19 board, the rules and tactics on a 9x9 board (or on any size board, for that matter) are the same. We recommend that you master the rules on a 9x9 board by playing your first games on it before graduating to a full-size board.

In *Figure 1* Black makes his first move on the 4–4 point, after which White makes his move. Thereafter, both sides continue to alternate in making their moves.

With the moves to White 6, both Black's and White's territories are beginning to take shape. Black has staked out the right side and White has laid claim to the left.

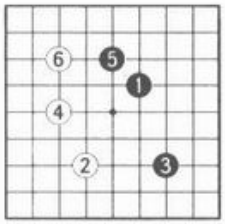


Figure 1

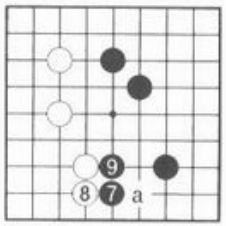


Figure 2

Once both players have mapped out their respective territories, there are two basic strategies to choose from. One is to expand your own territory while reducing your opponent's. The other is to invade the territory your opponent has mapped out.

Black 7 in *Figure 2* follows the first strategy: Black expands his territory on the lower right while preventing White from expanding his own with a move at 'a'. White must defend at 8 to prevent an incursion by Black into his territory on the left. Next, Black reinforces his territory on the right with 9.

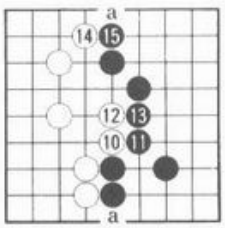


Figure 3

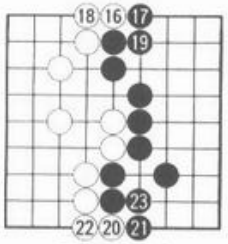


Figure 4

It is now White's turn to expand his territory. He first expands his center with 10 and 12 in *Figure 3*, then expands his territory on upper left with 14. Black must defend his top right territory with 15. Next, the points around 'a' must be decided.

The moves from White 16 to Black 19 in *Figure 4* are a standard sequence. A similar sequence is played at the bottom from White 20 to Black 23. By playing these moves, White expands his territory while reducing Black's.

White 24 to White 26 in *Figure 5* are the last moves of the game. It is now possible to determine the winner. In this case, counting the score is easy.

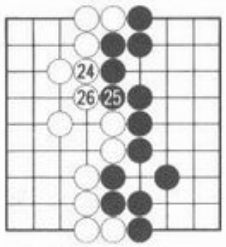


Figure 5

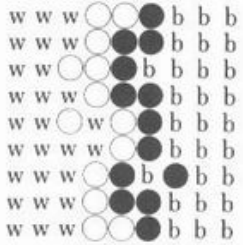


Figure 6

Black's territory consists of all the vacant points he controls on the right side, while White's territory consists of all the vacant points he controls on the left. More precisely, Black's territory is all the points marked 'b' in *Figure 6* and White's territory is all the points marked 'w'. If you count these points, you will find that Black has 28 points while White has 27, so Black wins by one point. Notice that the points occupied by the black and the white stones are not counted.

The above game was very simple and there were many aspects of the rules that did not arise. However, this game clearly illustrates what go is about. The other rules will be given in due course.

The Origins of Go

The origins of go are concealed in the mute and unchronicled past of ancient China. There are a tangle of conflicting popular and scholarly anecdotes attributing its invention to two Chinese emperors, an imperial vassal, and court astrologers. One story has it that go was invented by the legendary Emperor Yao (ruled 2357–2256 B.C.) as an amusement for his idiot son. A second claims that the Emperor Shun (ruled 2255–05 B.C.) created the game in hopes of improving his weak-minded son's mental prowess. A third says that one Wu, a vassal of the Emperor Chieh (ruled 1818–1766 B.C.), invented go as well as games of cards. Finally, a fourth theory suggests that go was developed by court astrologers during the Chou Dynasty (1045–255 B.C.). In any event, it is generally agreed that go is at least 3,000 and might be as much as 4,000 years old, which makes it the world's oldest strategic board game.

Go has not always enjoyed its current status as the world's most challenging and intellectually stimulating board game. In its infancy, go was said to have been used by astrologers to divine the future. Later, according to Chinese classics such as *The Analects of Confucius*, *Tso-chuan*, and *Mencius*, all of which were written no earlier than the sixth century B.C., it became 'the pastime of gamblers and other idlers'. While there might have been even earlier references to the existence of go in ancient China, the books that contained them were probably burned during the reign of Ch'in Shih Huang-ti, who, in 221 B.C., ordered that all books be burned. Because of this, all of the works and, therefore, references to go alleged to predate the Han Dynasty (206 B.C.-221 A. D.) are suspect. If, however, the references in the classics are accurate, then go seems to have been popular in China in the sixth century B.C., so it must have originated and subsequently developed at least a century or two before.

Beginning around 200 B.C., go and poetry enjoyed a golden age

in China until about 600 A.D. Whatever its sources and early reputation, by this time go obviously occupied a prestigious position. For example, in the second century A.D., the poet Ma Yung is said to have made himself famous by celebrating go in his verses. Of the many anecdotes about go that have survived from ancient China, the two most popular are these.

Sometime during the late third or early fourth century A.D., a go player named Osan gained historical immortality for his amazing ability to replay entire games (consisting of anywhere from 150 to more than 300 moves) from memory, move for move. Today, of course, all professional go players and many strong amateurs can do the same. In fact, the customary teaching technique used in Japan is for the teacher to reconstruct — play by play — games played with his students in order to give a criticize their moves. Nonetheless, this anecdote demonstrates that strength in go and a powerful memory go together.

The second anecdote illustrates the esteem in which go was held during its golden age in China. During the Chin Dynasty (265-420 A.D.), Hsieh An was at war with his nephew Hsieh Hsuan. After many bloody but inconclusive battles, these two warlords decided to spare their remaining soldiers and instead to allow the outcome of their war to be decided on the go board in a game played between themselves. Unfortunately, the result of this contest was not recorded.

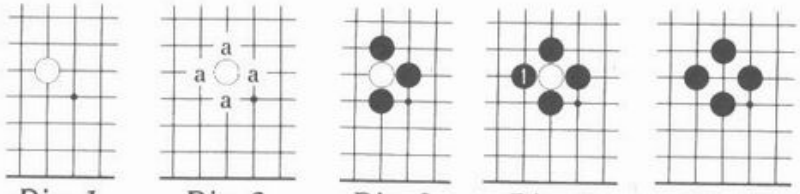
Go seems to have had two additional golden ages in China during the T'ang (618–906) and Sung (960–1126) dynasties. During these periods the first books about go, for example, *Gokyo* and *Gosetsu*, were written, and there were many distinguished players who were honored with titles such as Ki-Sei and Ki-Shing, from Ki meaning 'go', Sei meaning 'saint' and Shing meaning 'magician' or 'sorcerer'. Such titles are still used in Japan, for example, Kisei, which is the most prestigious title.

Chapter Two
Capturing Stones

In this chapter we are going to explain the rule of capture. We will show how a stone or group of stones is captured, demonstrate how these captures take place in a game, then give you some problems to test your understanding.

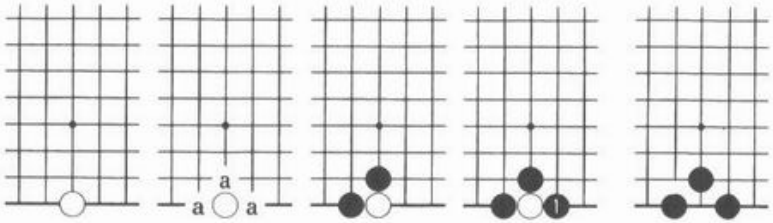
Liberties

The white stone in *Dia. 1* sitting alone on the board has four liberties, namely the points 'a' in *Dia. 2*. If Black can occupy all four of these points, he can capture the white stone. For example, since Black occupies three of these liberties in *Dia. 3*, he can capture the white stone on his next move if it is his turn to play. In such a position, the white stone is said to be in atari. Black captures this stone with 1 in *Dia. 4*. The resulting position is shown in *Dia. 5*.



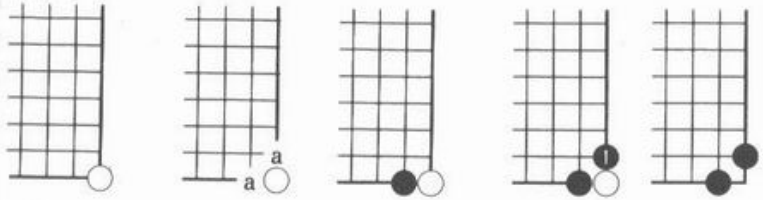
Dia. 1 *Dia. 2 liberties* *Dia. 3 atari* *Dia. 4 capture* *Dia. 5 result*

The white stone at the edge of the board in *Dia. 6* has three liberties, namely the three points marked 'a' in *Dia. 7*. If Black occupies two of these liberties, the white stone will be in atari as in *Dia. 8*. Black 1 in *Dia. 9* captures this stone. The result is shown in *Dia. 10*.



Dia. 6 *Dia. 7 liberties* *Dia. 8 atari* *Dia. 9 capture* *Dia. 10 result*

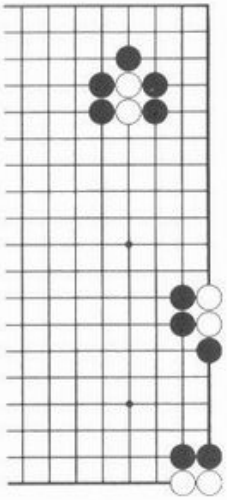
The white stone in the corner in *Dia. 11* has only two liberties, the two points marked 'a' in *Dia. 12*. If Black occupies one of these liberties, the white stone will be in atari as in *Dia. 13*. Black 1 in *Dia. 14* captures this stone and the result is shown in *Dia. 15*.



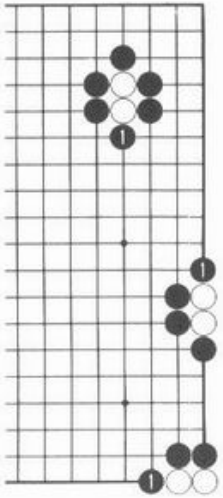
Dia. 11 *Dia. 12 liberties* *Dia. 13 atari* *Dia. 14 capture* *Dia. 15 result*

It is also possible to capture two or more stones if you occupy all of their liberties. Here are some examples.

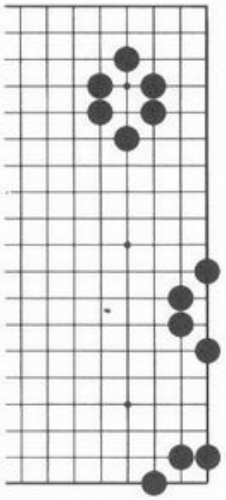
In *Dia. 16*, there are three positions in which two stones are in atari. Black captures these stones in *Dia. 17*. *Dia. 18* shows the result.



Dia. 16
atari



Dia. 17
capture

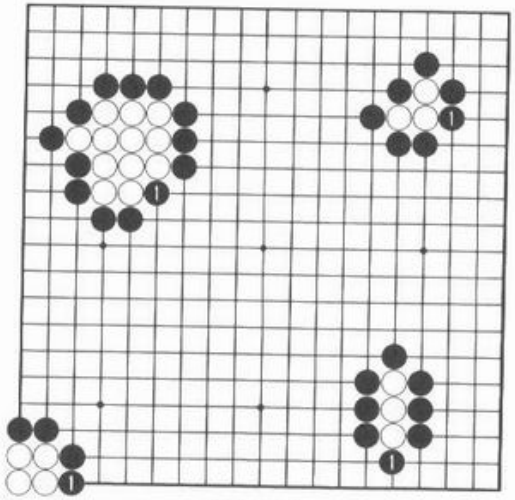


Dia. 18
result

Any number of stones, making up any kind of shape, can be captured if all of their liberties are occupied. In *Dia. 19*, there are four different positions. Black 1 captures twelve stones in the upper left, four stones in the lower left, three stones in the upper right and three stones in the lower right.

When you capture stones in a game, you put them in your prisoner pile; then at the end of the game, you place these captured stones inside your opponent's territory. Let's look at a game to see how this actually works.

After Black plays 3 in *Figure 1*, White plays inside Black's sphere of influence with 4. White 10 puts the black stone at 7 in atari. This stone has only one liberty remaining. If Black doesn't play at 'a', White will play on this point and capture the black stone.



Dia. 19

Black plays 11 in *Figure 2*, getting out of atari, but White makes another atari against the marked black stone with 12. Since this stone cannot be rescued, Black sacrifices it and plays an atari himself with 13 in *Figure 3*. White captures with 14 and puts this stone into his prisoner pile. Next, Black puts the two white stones in atari with 15. That is, he can capture them by playing at 'a'.

White's prisoner: ●

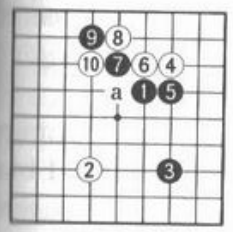


Figure 1

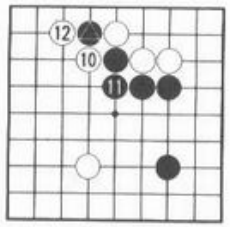


Figure 2

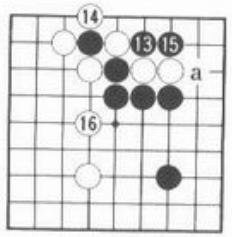


Figure 3

White secures the area on the left side with 16 in *Figure 4*, after which Black expands his right side with 17, 19, and 21. The sequence from White 22 to Black 25 is the same as the one we saw in the game in Chapter One.

White's prisoner: ●

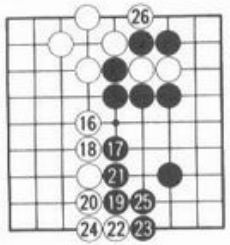


Figure 4

White's prisoner: ●

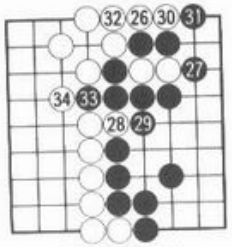


Figure 5
Black's prisoners: ○○

White's prisoner: ●

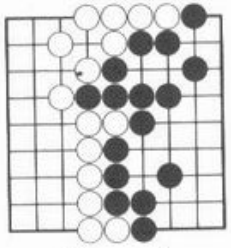


Figure 6
Black's prisoners: ○○

White 26 in *Figure 4* forces Black to capture two white stones with 27 in *Figure 5*. Black puts these two stones into his prisoner pile. White 28 and 30 each reduce Black's territory by one point. Black 31 is atari against the two white stones at 26 and 30, so White must connect at 32. Finally, Black 33 reduces White's territory on the left by one point. The game ends when White blocks with 34.

Figure 6 shows what the board looks like at the end of the game. White has one black stone in his prisoner pile, while Black has two white stones.

In *Figure 7*, each side places his prisoners in his opponent's territory. White places his one black prisoner (the marked black stone) inside Black's territory, and Black places his two white prisoners (the two marked white stones) inside White's territory.

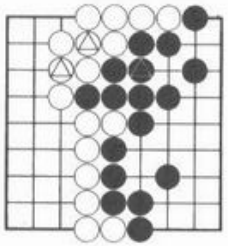


Figure 7

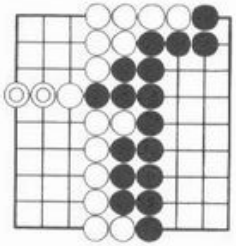


Figure 8

It is customary to rearrange the stones a bit to make the counting of territory simple and rapid. In *Figure 8* the three marked black stones and the two marked white stones were moved. Calculation of the size of the territories can now be made at a glance.

Black: 23 points; White: 24 points. White wins by 1 point.

Questions and Answers

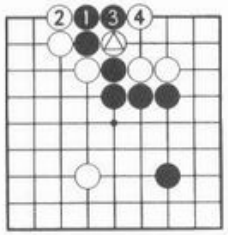
Here are three questions for you to think about. Try to answer them yourself before looking at the answers on the next page.

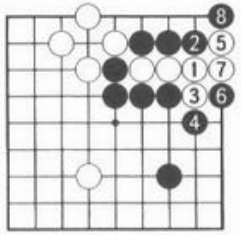
Question 1. After White 12 in *Figure 2*, why didn't Black try to escape with his marked stone?

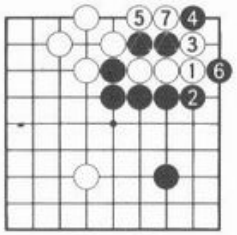
Question 2. After Black 15 in *Figure 3*, it seems as if the two white stones in atari could escape by extending to 'a'. Why doesn't White try?

Question 3. Is Black 25 in *Figure 4* necessary?

Answer 1. If he tries by playing Black 1 in *Dia.20*, White pursues him with 2 and the black stone will still be in atari. If Black persists with 3, putting the marked stone in atari, White captures three stones first by taking Black's last liberty with 4.


Dia. 20

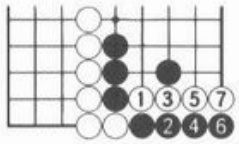

Dia. 21


Dia. 22

Answer 2. White can't escape unless Black blunders. When White extends to 1 in *Dia. 21*, he increases his liberties to three, but Black pursues him with 2. White is at the end of his rope. He has no way to increase his liberties after Black 4. If White plays 5, Black ataris with 6 and captures with 8.

However, Black must not play 2 from the outside as in *Dia. 22*. White turns at 3 and now the two marked black stones have only two liberties, while the white group on the right has three liberties. White captures the two marked stones with 5 and 7.

Answer 3. Black must defend with 25. If Black omits this move, White will atari the marked black stone with 1 in *Dia. 23*. If Black tries to run away with 2 and 4, White pursues him with 3 and 5, forcing the black stones into the corner where they run out of liberties. White captures four stones with 7.


Dia. 23

Go Comes to Japan

There are no written records verifying the precise date of go's introduction into Japan, but according to the *Records of the Sui*, the chronicle of a Chinese dynasty (597–618 A.D.), go was one of the three major pastimes enjoyed by early 7th century Japanese (the other two were backgammon and gambling). This information was presumably given to Sui court historians by the Japanese ambassador posted to the Sui capital in 607. If it was significant enough for the ambassador to name, then it is reasonable to conclude that go had arrived in Japan no later than the 6th century, and perhaps even earlier. Go was probably brought to Japan from Korea by artists, scholars, and ex-officials who migrated to Japan in order to escape political turmoil in their own land.

In contrast to the documentary evidence supplied from Chinese historical records, the popular belief in Japan is that go was brought directly from China in the year 735 by an aristocrat named Kibi no Makibi, popularly known as Grand Minister Kibi. He was sent to the Tang capital of Ch'ang-an with a commission from the Emperor Shomu's daughter, the future Empress Koken, to bring the best of Tang learning back to Japan. After eighteen years in China, Kibi returned to his native country laden with a cargo of artifacts representing his choice of the best of Chinese culture; he also brought back with him the fruits of almost two decades of experience and learning, including a knowledge of go.

In 701, a rule of conduct directed at Buddhist monks and nuns prescribed 100 days of hard labor as punishment for indulging in music and gambling, but koto playing and go playing were specifically excluded from this proscription of licentious and intemperate acts. While go was undoubtedly one of many games enjoyed by the upper classes of early 7th century Japan before Kibi's return from Ch'ang-an, it is probable that when he informed those at the imperial court of go's popularity at the Tang court, go was

elevated to a special status, resulting in its establishment as a game worthy of the Japanese nobility. It is safe to say that while Kibi did not introduce go to Japan, he was responsible for its achieving the great prestige it has enjoyed there.

After its initial introduction into Japan, go was played mainly at the court by nobles, both male and female, by Buddhist clerics, and by members of the military class, who are reputed to have taken their go equipment with them to battles in order to play at war after the actual fighting was over. However, it did not become a genuinely popular game until the twentieth century.

The oldest go boards in Japan are preserved as national treasures in the Shoso-in Museum in Nara. They belonged to the Emperor Shomu (ruled 724–748), and their playing surfaces are essentially the same as those in use today, except that one has seventeen star points instead of the nine found on modern go boards. In addition, the fact that both of these boards have 19x19 lines indicates that this size go board had replaced the 17x17 line board described in a third century A.D. Chinese study of go. The 17x17 line variety of go appears to have spread to the Himalayas sometime before the 8th century and continued to exist there. In 1959, when the Crown Prince of Sikkim traveled to Japan for a Buddhist conference, he brought a cloth 17x17 line go board with him and told reporters that go was still being played on boards of this size by a small circle of noble families in Nepal, Sikkim, Bhutan, and Tibet.

The first Japanese book about go is said to have been written in 913 by a monk named Tachibana Kanren at the request of the Emperor. Although the book is lost, records indicate that its title was *Go Shiki* ('A Method of Playing Go'). In *The Tale of Genji*, written in the early eleventh century by court lady Murasaki Shikibu, there are passages which show that go playing was a common pastime among both male and female aristocrats. One of the scenes from this early novel, in which Prince Genji spies on a game between Lady Utsusemi and another woman, has been a popular subject in Japanese art.

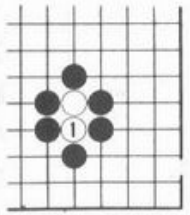
Chapter Three

Eyes and Living Groups

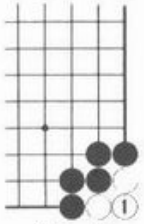
In the preceding chapter we saw how stones are captured. Here we will show how stones can be made safe from capture, but first we must present an important rule.

Suicide is Illegal

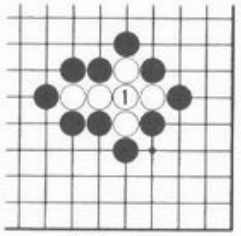
In general, you can play on any vacant intersection, but there are some restrictions. One is that you cannot commit suicide. That means that you cannot play so as to fill in the last liberty of your own stones. For example, White cannot play at 1 in *Dia. 1*. If he were to do so, his two stones wouldn't have any liberties, so they couldn't remain on the board. Similarly, White cannot play at 1 in *Dias. 2* or *3*, as his stones would be without liberties.



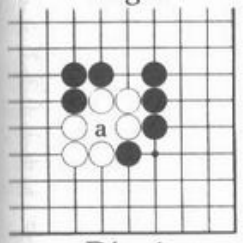
Dia. 1
illegal



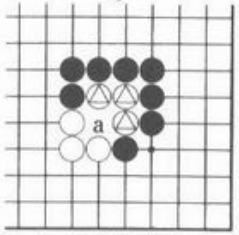
Dia. 2
illegal



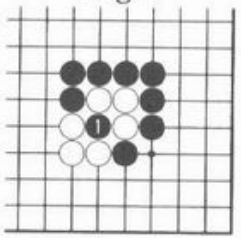
Dia. 3
illegal



Dia. 4

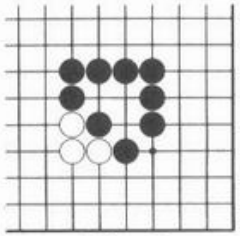


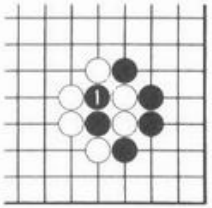
Dia. 5

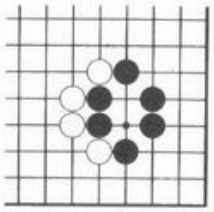


Dia. 6

Black 'a' in *Dia. 4* is also illegal, but the three marked white stones in *Dia. 5* are in atari: their only liberty is at 'a'. Thus, Black 1 in *Dia. 6* is not suicide: playing it results in the capture of White's stones. *Dia. 7* (next page) shows the result of this capture.


Dia. 7


Dia. 8

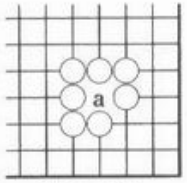

Dia. 9

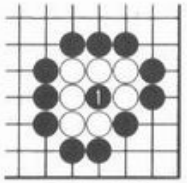
Black 1 in *Dia. 8* is also a permissible move since it captures two white stones. The result is shown in *Dia. 9*.

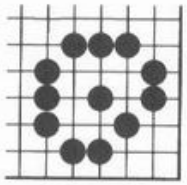
The basic concept in determining whether a group of stones is alive or dead is that of 'eyes'. There are three kinds of eyes: real eyes, eye spaces, and false eyes.

Real Eyes

The point 'a', surrounded by seven white stones, in *Dia. 10* is a 'real eye'. Of course, if Black occupies all the outside liberties of these stones as in *Dia. 11*, he can capture them by playing 1. The result of this capture is shown in *Dia. 12*.


Dia. 10

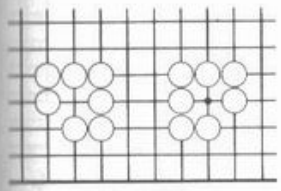

Dia. 11

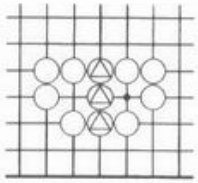

Dia. 12

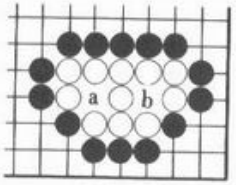
Now let's take two groups like the one in *Dia. 10*, merge them into one larger group (*Dias. 13* and *14*), and let Black occupy all this group's outside liberties (*Dia. 15*). The result is a white group that can never be captured.

Why not? The two points 'a' and 'b' inside the white group are

real eyes. It is suicide for Black to play on either of these two points, because, unlike *Dia. 11*, doing so does not result in the capture of White's group. If Black plays at the point 'a' in *Dia. 15*, White still has one liberty at 'b', and vice versa. Since Black can never occupy all the liberties of the white group in *Dia. 15*, it is unconditionally alive. From this we can define a living group.

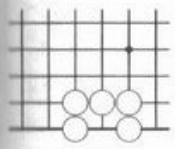

Dia. 13

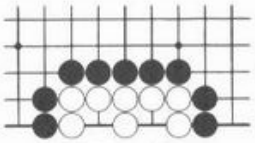

Dia. 14

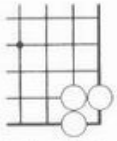

Dia. 15

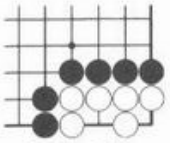
A group is alive if it can form two real eyes.

Dia. 16 shows a group with a real eye at the edge of the board. At the edge, it takes five stones to make a real eye. If we put two such groups together and fill in the outside liberties with black stones (*Dia. 17*), this group can never be captured because it has two real eyes.


Dia. 16


Dia. 17

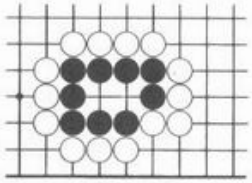

Dia. 18

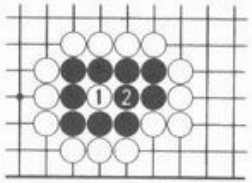

Dia. 19

In the corner, it takes only three stones to make a real eye. *Dia. 18* shows such a group. Attaching a real eye at the edge to this group results in a living group in the corner (*Dia. 19*).

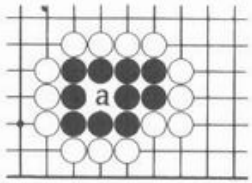
Eye Spaces

You might think that the black group surrounded by white stones in *Dia. 20* has two eyes. However, the two points making up the eye aren't separated, so this is actually a two-point eye space. Since it does not have two separated real eyes, the black group is dead. *Dias. 21* and *22* show how it is killed.


Dia. 20



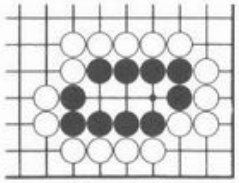
Dia. 21

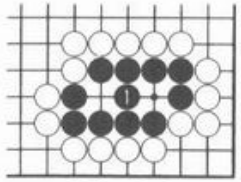


Dia. 22

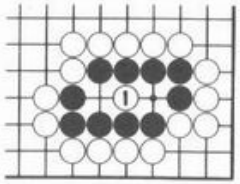
First White plays at 1. The black group is in atari, but if Black captures the white stone with 2, he is left with only one real eye, which constitutes his only liberty, so White can capture the ten black stones on the next move by playing at 'a'.

Not all groups with eye spaces are dead. Some are unconditionally alive, others are alive or dead depending on whose move it is.


Dia. 23



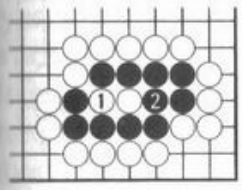
Dia. 24



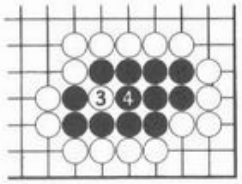
Dia. 25

Dia. 23 shows a black group with a three-point eye space. The life or death of this group depends on whose move it is. If Black plays first, he lives by playing 1 in *Dia. 24*. If White plays first, he kills Black by placing a stone in the middle of this three-point eye space with 1 in *Dia. 25*.

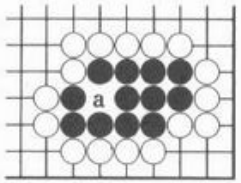
If White must prove it is dead, he ataris with 1 in *Dia. 26*. If Black captures with 2, the position results in the two-point eye space. White ataris with 3 in *Dia. 27* and, after Black captures with 4, his only liberty is his one real eye at 'a' in *Dia. 28*.



Dia. 26

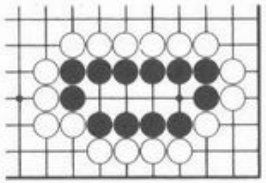


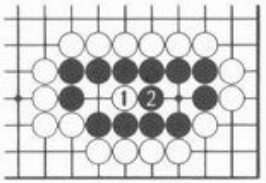
Dia. 27



Dia. 28

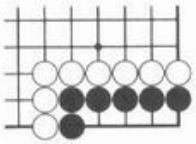
Dia. 29 shows a black group with a four-point eye space. This group is alive as it stands. If White plays 1 in *Dia. 30*, Black plays 2 and he has a real eye at the point to the right of 2, plus another eye to the left of 1. White cannot play on either of these points without committing suicide.

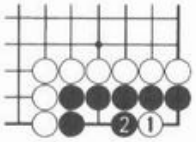

Dia. 29



Dia. 30

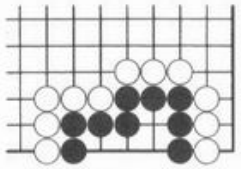
Similarly, the four-point eye space in the corner in *Dia. 31* is alive. If White 1, Black rebuffs the attack simply by playing 2 in *Dia. 32*.

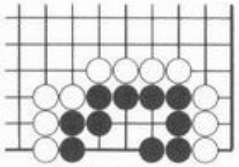

Dia. 31

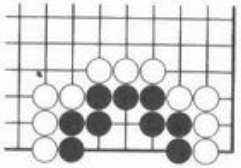


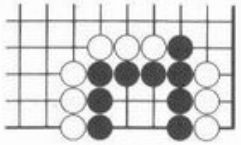
Dia. 32

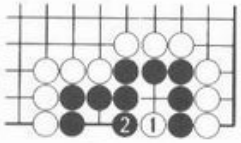
Dias. 33 to *36* show four other black groups with four-point eye spaces. The groups in *Dias. 33* and *34* are unconditionally alive. If White plays 1 in either *Dia. 37* or *Dia. 38*, Black lives by playing at 2. On the other hand, if White 1 at 2, Black plays 2 at 1.

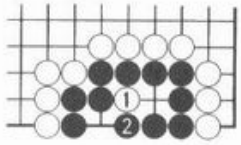

Dia. 33


Dia. 34

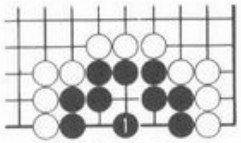

Dia. 35

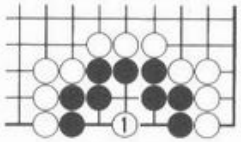

Dia. 36

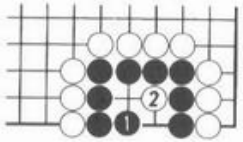

Dia. 37


Dia. 38

In *Dia. 35*, if it is Black's turn, he can live by playing 1 in *Dia. 39*, but Black is dead if White plays 1 in *Dia. 40*.


Dia. 39


Dia. 40


Dia. 41

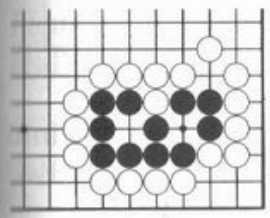
The black group in *Dia. 36* is dead as it stands. If Black plays 1 in *Dia. 41*, White kills the black group by playing at 2; or, if Black 1 at 2, White 2 at 1.

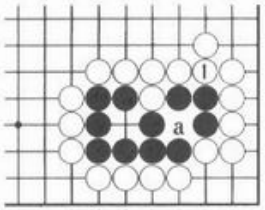
You should verify for yourself that the black groups in *Dia. 40* and *41* are dead. The method is the same as shown in *Dias. 26* to *28*.

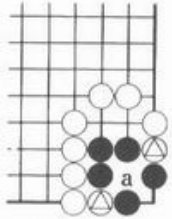
False Eyes

Finally, we are going to look at false eyes. As the name indicates, these are not really eyes at all — eventually they will have to be filled in.

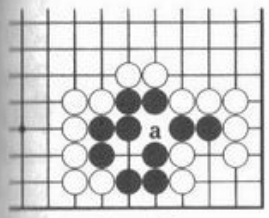
At first glance, the black group in *Dia. 42* appears to have two eyes, but on closer inspection you can see that the eye on the right is not really an eye. White can atari with 1 in *Dia. 43*; if Black doesn't defend at 'a', he will lose three stones and the remaining stones in the group will be in atari. But if he does defend at 'a', his only liberty is the eye on the left, so his group dies.

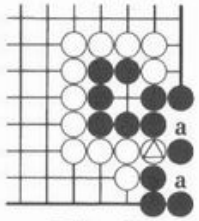

Dia. 42

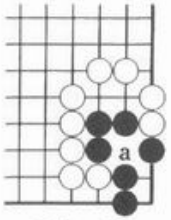

Dia. 43


Dia. 44

Dias. 44 to *47* show some other examples of false eyes. The points marked 'a' are all false eyes.


Dia. 45


Dia. 46


Dia. 47

In the course of a game, groups of stones often get isolated from their allies and they have to be able to form two eyes on their own, otherwise the stones will die. Let's look at a game to see how this happens.

In *Figure 1*, White jumps right into Black's sphere of influence with 6. Black plays 7 and the white stone is confined to the upper right sector of the board. This stone has to form two eyes on its own if it is going to live. White sacrifices the stone at 8 and plays the sequence to 18 in *Figure 2*, taking a small territory in the upper right corner. It is within this space that he is going to have to make his two eyes.

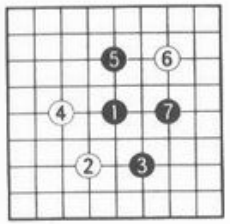


Figure 1

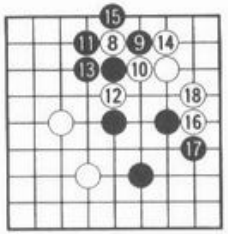


Figure 2

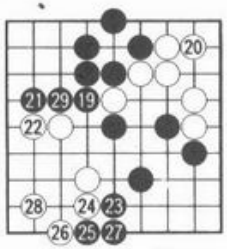


Figure 3

When Black plays 19 in *Figure 3*, the white group is sealed into the upper right corner, so White must play 20 in order to get two eyes there.

After 20, Black and White define their respective territories with the moves to 29.

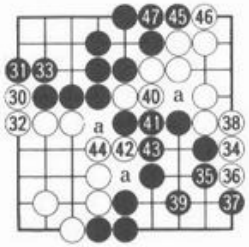


Figure 4

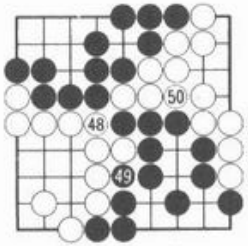


Figure 5

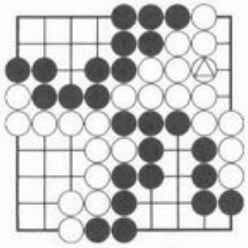


Figure 6

No more invasions are possible, so the endgame begins. At this stage, the players try to expand their territories and decrease their opponent's. White 30 and 32 in *Figure 4* decrease Black's corner territory in the upper left. White 34 to 39 do the same in the lower right. When Black defends against White's atari at 46 with 47, there are no more points to be gained, so the game is over.

Neutral Points

Note the points marked 'a' in *Figure 4*. These are known as neutral points. It doesn't matter which side plays them because they are not territory and have no affect on the score, but it is customary for each side to take turns playing them. The moves from 48 to 50 in *Figure 5* show how this is done.

When you count the score, remember that Black captured the black stone at 8 in *Figure 2*. This stone is put into White's territory (the marked stone in *Figure 6*).

The final score — Black: 17 points; White: 14 points. Black wins by three points.

You might wonder if the game is really over in the position in *Figure 5*. For instance, is the white group in the upper right corner really alive? What would happen if Black attacked it?

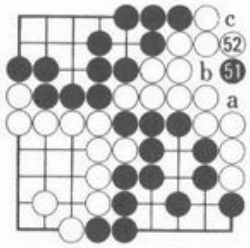


Figure 7

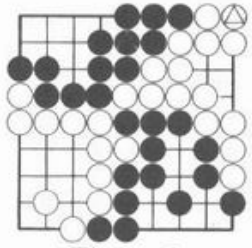


Figure 8

If Black played 51 in *Figure 7*, White would answer with 52. White now has a real eye at 'c' (on the 1–1 point) and a three-point eye space below. Further play by Black in this area has no effect (Black at 'a' or 'b' would be ignored and a black move at 'c' would be suicide), so the stone at 51 is dead.

Dead Stones Need Not Be Captured

Let's count the score from *Figure 7*. The black stone at 51 is dead: it cannot form two eyes. At the end of the game, all dead stones that both sides agree cannot make two eyes are removed from the board and put in each side's prisoner pile. This means that the stone at 51 is first put into White's prisoner pile and then placed

inside Black's territory. There is one white prisoner in Black's prisoner pile. This prisoner is placed on the 1–1 point (the marked white stone) in *Figure 8*. White has picked up one prisoner (the stone at 51 in *Figure 7*). This is placed in Black's territory (the marked black stone in *Figure 8*).

The final score — Black: 16 points; White: 13 points. Black again wins by 3 points.

Although the amount of territory each side ends up with is different from *Figure 6*, the margin of victory has not changed.

Suppose that White answered Black 51 in *Figure 7* with 52 in *Figure 9*. Black would then play 53 and the white group would be unable to make two eyes. The white stones are dead as they stand and further play is not necessary. When both sides agree that the game is over, Black will pick up these white stones, put them into his prisoner pile, then place them in White's territory.

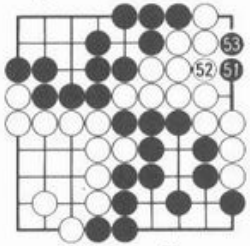


Figure 9

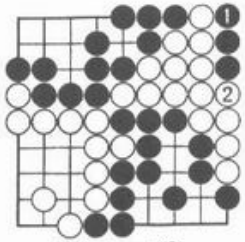


Figure 10

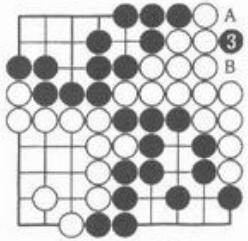


Figure 11

Although you don't have to play these moves, you can prove to your opponent that they are dead by playing atari with Black 1 in *Figure 10*. If White captures with 2, Black plays in the middle of the three-point eye space with 3 in *Figure 11*. Next, White can't play at A or B without putting his stones in atari. (Refer to *Dia. 25*.)

Situations in which you must determine whether a group of stones lives or dies constantly arise in games, so it is important to develop the ability to find the moves that will save your groups. On the other hand, you may also find that your opponent's groups are vulnerable. In these cases you will want to be able to kill your opponent's groups. In a later chapter, we will cover this very important area of go technique.

The Development of Go in Japan

The earliest Japanese go game on record is dated 1253 and is supposed to have been played by Nichiren, founder of the Nichiren sect of Buddhism, and a nine-year-old disciple named Nisshomaru. This game was played following the traditional Chinese convention of placing two white and two black stones on the corner star points before starting the game. This convention was eventually abandoned by the Japanese in the 14th or 15th century, but it was continued in China until the 20th century, when they too switched over to beginning even games with an empty board.

The three Japanese warlords of the late 16th and early 17th centuries, Oda Nobunaga, Toyotomi Hideyoshi, and Tokugawa Ieyasu, were all devotees of go. Of the first, Nobunaga, it is said that when he was staying in the Honnoji Temple in Kyoto in 1582, he watched Nikkai, the strongest player in Japan at that time, play what is now a famous game with his main rival Kashio Rigen. During the course of the game, a triple ko arose, which led to the game being declared a draw. The night after the game, Nobunaga's ally Akechi Mitsuhide rose up in rebellion and succeeded in killing Nobunaga. Thereafter, a triple ko has been regarded as an ill omen, and games in which they arise are adjudicated as draws.

Nobunaga's successor, Toyotomi Hideyoshi, who quickly eliminated Akechi, was also fond of go. In 1588 he organized a large-scale competition in order to systematize the rankings of the go players in Japan. Nikkai won this competition and Hideyoshi decreed that from then on all other players should take black or a larger handicap from him. Nikkai was also awarded a stipend, and this was the beginning of government patronage that enabled go to flourish in Japan.

At the beginning of the 17th century, four go houses were established. They were the Honinbo (of which Nikkai became the head, changing his name to Honinbo Sansa), Inoue, Yasui, and Hayashi houses. These houses competed in the search for the most talented players and devoted great effort to the study and development of go theory and technique in order to surpass each other. Around the same time, in 1603, Tokugawa Ieyasu united Japan under the Tokugawa Shogunate and moved the seat of government from Kamakura to Edo, now called Tokyo. The same year, the Tokugawa government awarded stipends to the leading go players, established the office of Godokoro (held by Honinbo Sansa until 1623), and instituted the annual Oshiro Go (castle games) played in the presence of the Shogun.

The Godokoro was head of the government go office, the top post in the Edo period go world. The holder of this position was official go instructor to the Shogun; he also controlled promotions and the issuing of diplomas. In addition, the Godokoro decided pairings for the annual castle games and was responsible for all ceremonies connected with go, such as games played before the Emperor and games with foreigners. Because he was the Shogun's teacher, he was barred from competitive play unless granted special permission.

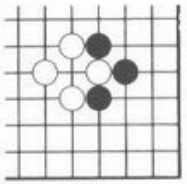
Only the top player could become Godokoro, which meant that he would also be promoted to Meijin. (Meijin means master player or expert. It is said that sometime in 1578 while Nobunaga was watching Nikkai play, he was so impressed with the latter's skill that he cried out 'Meijin!' This is apparently the origin of the term. In modern Japan it continues as the name of one of the top three professional go titles.) The holder of this office was always called Meijin Godokoro. However, even though all Godokoro were also Meijin (there was only one at a time, and he held the title for life), being promoted to Meijin did not guarantee that one would become Godokoro. In fact, the office of Godokoro was often vacant.

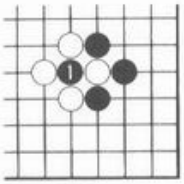
When the Tokugawa Shogunate fell in 1868, government support of go in Japan came to an end. For the next twelve years the Japanese were preoccupied with the novelty of things Western and interest in go fell to an all-time low. Around 1880, however, their interest in go was revived , but this time under private auspices.

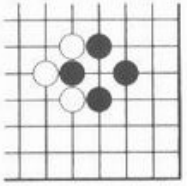
Chapter Four
Ko

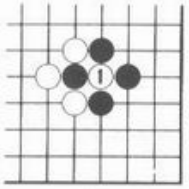
The next four diagrams show a special situation called ko. Look at the position in *Dia. 1*. If it is Black's turn to play, he can capture a white stone by playing at 1 in *Dia. 2*, resulting in the position in *Dia. 3*. But now it seems that White can recapture the black stone with 1 in *Dia. 4*, resulting in the same position as *Dia. 1*. If this were allowed and neither side were willing to give in, a capture–recapture situation could go on forever were it not for a special rule regarding ko. The ko rule is quite simple:

If one side captures a stone in ko,
the other side cannot recapture on the next move.


Dia. 1

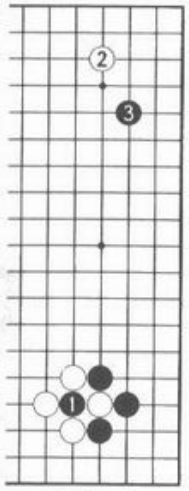

Dia. 2

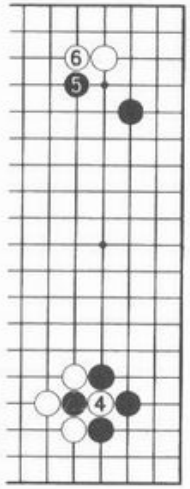

Dia. 3

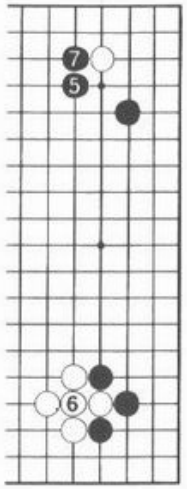

Dia. 4

Let's look at an example. Black captures at 1 in *Dia. 5*. Because this is a ko, White must play somewhere else before he can recapture, so he plays at 2. If Black answers with 3, White can recapture the marked stone with 4 in *Dia. 6*. Now Black must play elsewhere before he can recapture. If he plays 5 and White answers with 6, Black can recapture the white stone at 4 by playing 7 at the marked stone.

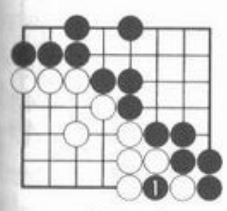
However, White might not play 6 in *Dia. 6*. He might choose to end the ko by connecting at 6 in *Dia. 7*. As compensation, Black has been able to make two moves in a row with 5 and 7.

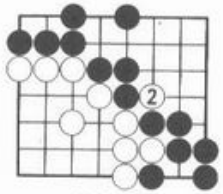

Dia. 5

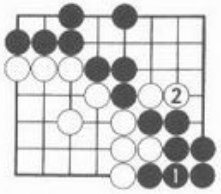

Dia. 6
Black 7 at △


Dia. 7

Let's look at another example. In the position in *Dia. 8*, there is a ko fight taking place at the edge of the board. Black captures a stone with 1 and puts it into his prisoner pile, so this is worth one point to him.


Dia. 8

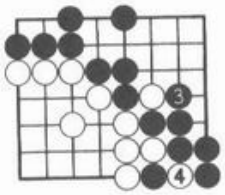

Dia. 9

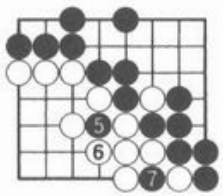

Dia. 10

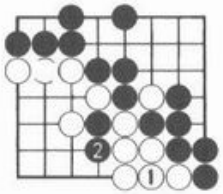
If White wants to get this point back, he must recapture this stone, but he has to wait one move before he can do so. Therefore, he makes a 'ko threat'.

A ko threat is a move which threatens to gain more points than the other side can gain by ending the ko. White 2 in *Dia. 9* is an example of a ko threat. If Black ends the ko by connecting at 1 in *Dia. 10*, White ataris with 2 and Black can't prevent the capture of seven of his stones.

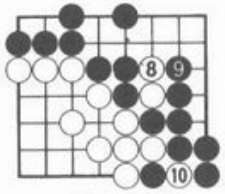
Therefore, Black must play 3 in *Dia. 11*. Now White can come back and retake the ko with 4.

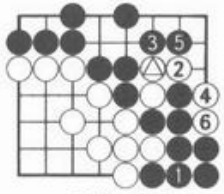

Dia. 11

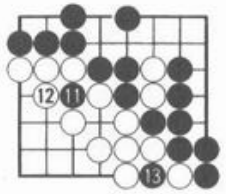

Dia. 12


Dia. 13

If Black wants to win this ko fight, he must make a ko threat of his own before recapturing the ko. This he does with 5 in *Dia. 12*. If White tries to end the ko by connecting at 1 in *Dia. 13*, Black ataris six white stones with 2, so White answers Black's threat at 5 by capturing with 6 in *Dia. 12*. Black then takes the ko with 7.


Dia. 14


Dia. 15


Dia. 16

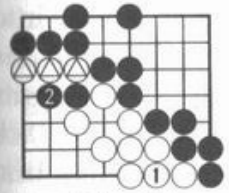
White 8 in *Dia. 14* is another ko threat, to which Black must respond with 9, enabling White to continue the ko fight by taking a stone with 10.

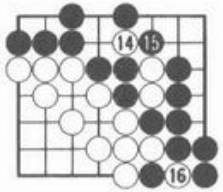
Dia. 15 shows why White 8 in *Dia. 14* is a ko threat. If Black connects the ko with 1 in response to the marked stone, White turns at 2. Up to 6, White captures eight stones in the corner before Black can capture him.

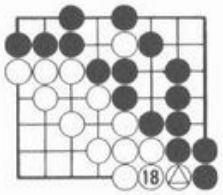
Black makes another ko threat with 11 in *Dia. 16*. White captures with 12, enabling Black to take the ko with 13.

If White ends the ko by connecting at 1 in *Dia. 17*, Black plays 2, and the three marked stones will be captured.

White makes another ko threat with 14 in *Dia. 18*, threatening to capture the three marked black stones. Black answers by capturing two white stones with 15 and White takes the ko with 16.


Dia. 17


Dia. 18


Dia. 19
17: passes

Passing at the End of the Game

At this point, Black has no more ko threats. Any move he makes inside his own territory will lose him points and, if he plays inside White's territory, White will not answer, so the stone he plays will be picked up at the end of the game and put into White's prisoner pile. Thus, any move Black makes will lose him a point. Moreover, because of the ko rule he is not permitted to recapture the ko. Consequently, Black's best move is to pass with 17 in *Dia. 19* (passing is counted as a move). This gives White the chance to end the ko by connecting at 18. Black passes again and so does White, because neither side has a move that can gain territory or reduce the opponent's territory. The game is over and White has won the ko fight. That is, he has prevented Black from capturing the marked stone.

Let's look at one more game on a 9x9 board in which we can see the actual development of a ko fight.

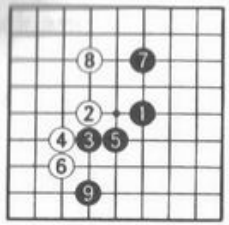


Figure 1

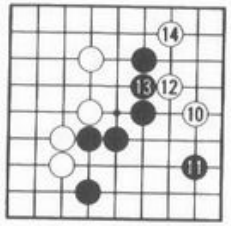


Figure 2

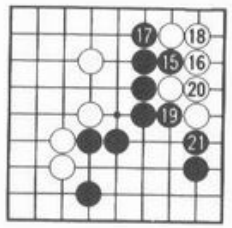


Figure 3

In *Figure 1*, Black and White map out their territories on the right and left side respectively. Then in *Figure 2*, White jumps into Black's sphere of influence with 10 and establishes a base in the upper right corner with the sequence to 14. In *Figure 3*, Black puts pressure on White's group in the upper right corner. After Black 21, White still needs one more move to live. However, White first exchanges 22 (to expand his territory in the upper left) for 23 in *Figure 4*, then plays 24, the move which guarantees that he will get two eyes and life for his group.

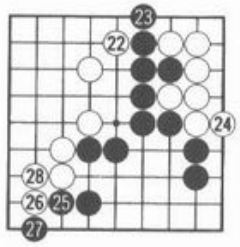


Figure 4

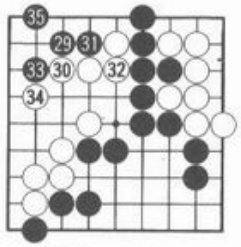


Figure 5

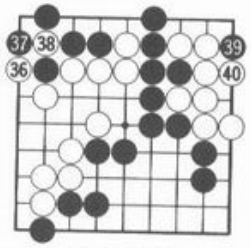


Figure 6
Black 41: below 38

Next, Black expands his territory in the lower left with 25 and 27, forcing White to defend with 26 and 28.

In *Figure 5*, Black invades the upper left corner with 29 and starts to establish a base there with the sequence to 35. White ataris with 36 in *Figure 6* and Black sets up a ko when he plays 37.

White takes the ko with 38. Black then makes a ko threat with 39. White must play 40 or his stones in the upper right corner will die. Now Black comes back and takes the ko with 41 at the point below 38.

White makes a ko threat of his own with 42 in *Figure 7*, threatening to break into Black's territory at the bottom left. Black defends by blocking at 43 and White takes the ko with 44.

It is now Black's turn to make a ko threat, so he plays 45, threatening to link this stone up with the marked black one, thereby killing the eight white stones in the corner. White defends against this threat by blocking with 46, and Black takes the ko with 47, one point below 44. (Black 45 at 46 would also have been a ko threat, but playing 45 as in this diagram gives Black another ko threat at 'a'.)

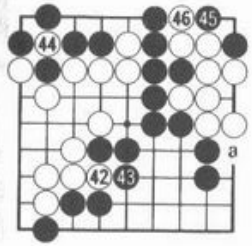


Figure 7
Black 47: below 44

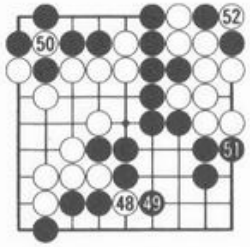


Figure 8
Black 53: below 50

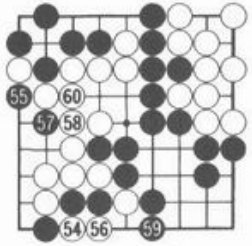


Figure 9

White 48 in *Figure 8* is another ko threat. It threatens to wipe out Black's territory in the lower right corner by extending to 49, so Black defends with an atari at 49. White goes back and takes the ko with 50. Next, Black ataris the group of nine white stones in the upper right corner, forcing White to capture two black stones with 52 and enabling Black to take the ko with 53 (one point below 50).

White 54 in *Figure 9* ataris three black stones in the lower left, but Black ignores this ko threat and takes a stone with 55, ending

the ko fight. White captures two stones as his compensation for losing the ko. Next, Black exchanges 57 for 58, then defends the lower right with 59. White in turn saves his stone in atari by connecting at 60.

Black and White play the last points of the game in *Figure 10*, and the neutral points are played in *Figure 11*. Notice that Black must answer White 70 by playing a stone in his own territory with 71. If Black doesn't play here, White would play at the point 71, a double atari against the eight-stone group above and the three-stone group to the left.

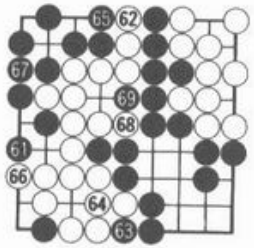


Figure 10

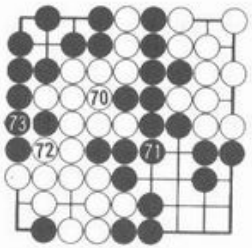


Figure 11

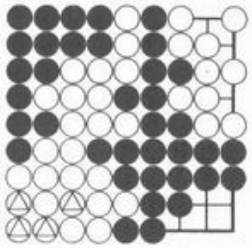


Figure 12

White 72 in *Figure 11* threatens to capture two black stones, so Black must answer with 73. There is no more territory that can be taken or invasions that can be made, so both sides pass and the game is over.

Black and White put the prisoners they have captured in the game (the triangled stones) into their opponent's territory in *Figure 12*. White also takes the dead stone in the lower left corner in *Figure 11* and puts it in Black's territory (the circled stone in *Figure 12*. The final score can now be calculated —Black: 5 points; White: 3 points. Black wins by two points.

You now know almost everything you need to know to play go. Even though some of the rules might not be completely clear, we suggest that you start playing some games on a 9x9 board, while continuing to read this book.

Professional Go in Japan

Professional go in its current form was born in Japan, and although go is played professionally in China, Korea, and Taiwan as well, Japan has the largest number of competition professionals in the world, close to 400, divided between the Tokyo-based Nihon Ki-in (Japan Go Association) with 374 active professionals listed.

Substantial earnings can be made through game fees and prize money from the many tournaments they compete in. In addition, professional go players also earn money from officiating at tournaments, TV appearances, royalties on go books and videos, as well as commercial advertisements. However, very few professionals can live only on their tournament winnings, so most teach or write go books and articles to supplement their earnings.

How does one become a professional go player? In Japan, the usual way is to become an apprentice professional (*insei* in Japanese) at the Japan Go Association or the Western Japan Go Association. The Japan Go Association, accepts only youngsters from the age of five up to the age of eighteen (with occasional exceptions) who show exceptional talent for the game. Every Saturday and Sunday throughout most of the year, these young student professionals compete with each other in a rating tournament. In order to qualify as a professional, they must work their way up to the upper echelons of the rating ladder. Out of 48 aspiring professionals, only five are admitted to professional rank each year.

Most apprentices have a teacher, usually a high-ranking professional, who guides them in their go studies. Every afternoon after school the usual routine for a student is to analyze games with his fellow students or to study go by himself.

Once an apprentice has become a professional, he starts out at the rank of 1-dan. In order to raise this rank he plays against other professionals in a rating tournament called the *Oteai*. Although the system for gaining promotion is complicated, in essence, if the

player's percentage of wins over a number of games is high enough, he will be promoted to the next rank. The highest rank attainable is 9-dan.

A professional is also eligible to compete in numerous tournaments which sometimes offer fabulous prize money. In Japan at present there are 21 tournaments in which professionals compete. Below is a list of these tournaments, the current title holders (August 1997), and the prize money ($1.00 = ¥120):

1. Kisei – Cho Chikun; ¥32,000,000
2. Meijin – Cho Chikun; ¥27,000,000
3. Honinbo – Cho Chikun; ¥24,000,000
4. Judan – Kato Masao; ¥10,500,000
5. Tengen – Ryu Shikun: ¥10,000,000
6. Oza – Ryu Shikun; ¥10,000,000
7. Gosei – Yoda Norimoto; ¥6,200,000
8. NEC Cup – Kato Masao; ¥10,000,000
9. ACOM Cup – Kato Masao; ¥5,000,000
10. Women's Honinbo – Yoshida Mika; ¥5,000,000
11. Women's Meijin – Nishida Terumi; ¥4,500,000
12. Kakusei – Kobayashi Koichi ; ¥4,500,000
13. NHK CUP – O Rissei; ¥4,000,000
14. Lightning Go Championship – Cho Chikun; ¥4,000,000
15. Women's Kakusei – Nakazawa Ayako; ¥3,500,000
16. JT Cup – Yoda Norimoto; ¥3,500,000
17. Ryusei – Kobayashi Satoru; ¥3,000,000
18. Shinjin-O (King of New Stars) – Takao Shinji; ¥2,500,000
19. NEC Young Stars (Shun'ei) Yo Kagen; ¥1,400,000
20. Okan – Yamashiro Hiroshi; ¥900,000
21. Shin'etsu (New Stars) Tournament – Yo Kagen; ¥800,000

Eligibility to compete in some of these tournaments have conditions. Three are restricted to women professionals, three to professionals under thirty years of age. Five of these tournaments are 'lightning go' in which players are given one minute a move.

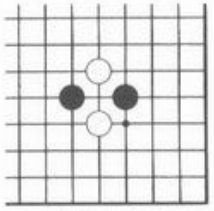
Only professionals affiliated with either the Japan Go Association or the Western Japan Go Association may compete in the above tournaments. Most of these tournaments start off each year with a number of preliminary stages which consist of knockout tournaments. In the first stage, lower-ranked players compete for places in the second stage, where they meet the seeded higher-ranked players. The winner of the final stage becomes the challenger, or, in the case of the Meijin and Honinbo tournaments, the last surviving three or four players in the final preliminary stage are allowed to enter the final round-robin tournament (called a league) consisting of nine and eight players respectively. The winner of this final tournament becomes the challenger to the title holder.

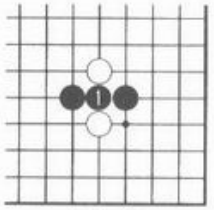
For each game played in these tournaments, a professional receives a game fee. In the early stages, the fee may amount to only a few tens of thousands of yen (a few hundred dollars), but the higher the player's rank and the more games he wins, the higher his game fee becomes. Fees for each game in the Meijin league, for example, are ¥760,000 for the winner and ¥430,000 for the loser.

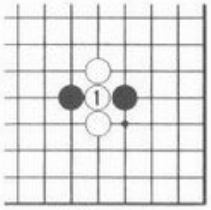
In recent years there has been a movement in Japan to create some tournaments that are international and open to players from other countries. The first of these was the World Amateur Go Championship, established in 1979, where go associations around the world send their best players to compete in a tournament in Japan. Then in April 1988 the Fujitsu Cup, a world go championship, was founded by Fujitsu, Japan's largest computer manufacturer. Open qualifying tournaments are held in America, Europe, China, Korea, and Japan, and winners compete with eight seeded players.

Chapter Five
Linking up Stones

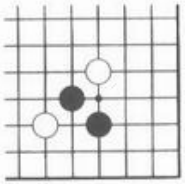
As we saw in the first part, stones which lie adjacent to each other either vertically or horizontally form unbreakable connections.

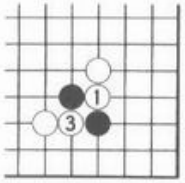

Dia. 1


Dia. 2

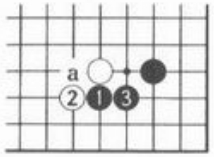

Dia. 3

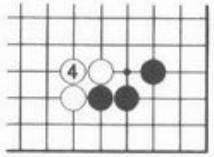
Look at the two black and two white stones in *Dia. 1*. If Black plays 1 in *Dia. 2*, his three stones form an unbreakable connection, while White's stones are separated. If White plays 1 in *Dia. 3*, it is Black's stones that have become separated and White's which are connected.

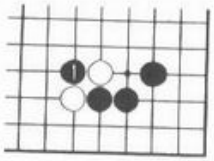

Dia. 4


Dia. 5

Stones which are diagonally adjacent are not really connected. The two black stones in *Dia. 4* form a strong link, but it is possible to separate them. For example, if White plays 1 in *Dia. 5* and Black plays his next move elsewhere, White can play 3 and separate the two black stones.

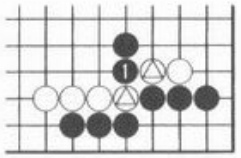

Dia. 6

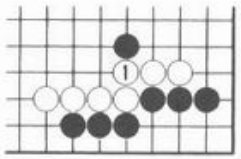

Dia. 7


Dia. 8

The moves to Black 3 in *Dia. 6* are a standard sequence which often occurs in games. The two white stones are not connected and can be separated by Black 'a'. White can connect these stones by playing at 4 in *Dia. 7*. The white stone on the right is now connected horizontally to the stone at 4, and the white stone on the left is connected vertically to the stone at 4.

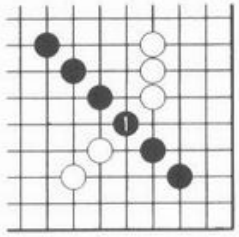
If Black played 1 in *Dia. 8*, then the two white stones would be separated, and Black would be able to capture at least one of them no matter how White defended.

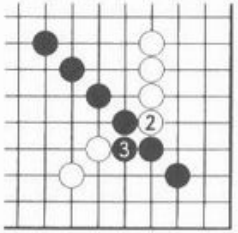

Dia. 9

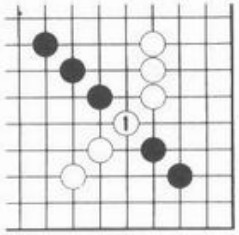

Dia. 10

In the position in *Dia. 9*, White's two marked stones are diagonally adjacent and Black has separated White into two groups by playing at 1. This has seriously weakened White's position. If he had a chance, he should have connected with 1 in *Dia. 10*.

Stones diagonally adjacent to one another do form potential links and playing diagonal moves are often the only way to ensure that connections are made between stones. In *Dia. 11*, for example, Black can diagonally link all his stones and separate White's by playing at 1. If White threatens to break this connection by playing at 2 in *Dia. 12*, Black defends at 3, making an unbreakable connection. On the other hand, if it were White's turn to play, he could link up his stones with the diagonal move at 1 in *Dia. 13* and separate the black stones.

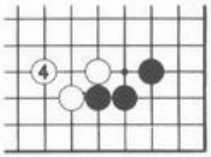

Dia. 11

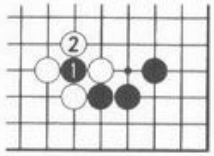

Dia. 12

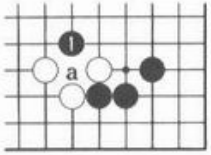

Dia. 13

Solid Connections and Diagonal Connections

The connection that White made at 4 in *Dia. 7* is referred to as a 'solid connection'. However, White could also have prevented Black from separating his stones by playing 4 in *Dia. 14*.


Dia. 14


Dia. 15

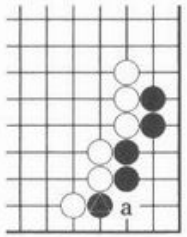

Dia. 16

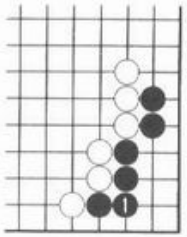
This kind of connection is called a 'diagonal connection'. Black can't separate the white stones by playing 1 in *Dia. 15*. His stone is in atari and it will be immediately captured by White 2.

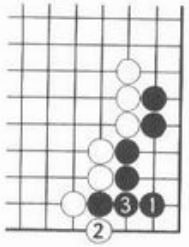
Black could play 1 in *Dia. 16* first, threatening to break the connection with a move at 'a', but a white move at 'a' would thwart

this threat. The diagonal connection is not perfect, but it usually works just as well as the solid connection.

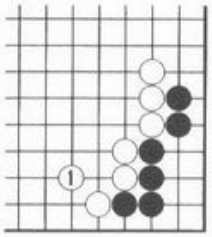
In *Dia. 17*, White is threatening to capture the marked stone by playing at 'a'. In this case, the solid connection at 1 in *Dia. 18* is correct. A diagonal connection at 1 in *Dia. 19* would lose points since White could atari at 2.

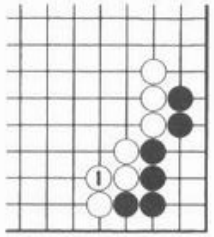

Dia. 17


Dia. 18


Dia. 19

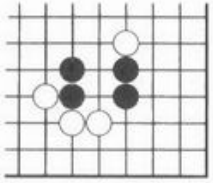
After Black 1 in *Dia. 18*, White must defend his position on the outside. A diagonal connection at 1 in *Dia. 20* is the best move. He could also make a solid connection at 1 in *Dia. 21*, but this would be inferior. The diagonal connection at 1 in *Dia. 20* develops towards the outside more expansively than 1 in *Dia. 21*.

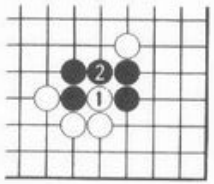

Dia. 20

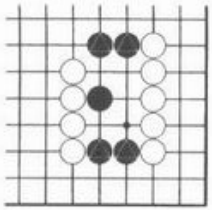

Dia. 21

Bamboo Joints

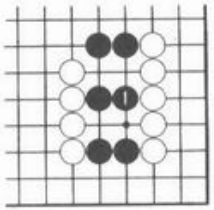
Another kind of connection that you will find useful is the bamboo joint, an example of which is shown in *Dia. 22*. Even though the two marked black stones are not directly linked to the other two, this is a very hard connection to break. If White plays 1 in *Dia. 23*, Black can play 2 to ensure his connection, and vice versa.

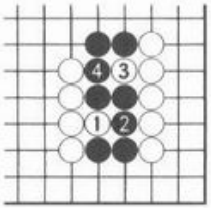

Dia. 22

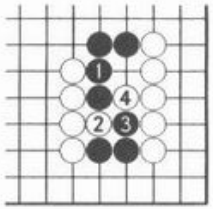

Dia. 23


Dia. 24

In *Dia. 24*, Black wants to link up his two marked stones above to his two marked ones below. Making a bamboo joint with 1 in *Dia. 25* is the only way to do this. If White tries to break through with 1 and 3 in *Dia. 26*, Black defends with 2 and 4 and his stones are linked up. Black 1 in *Dia. 27*, however, fails. White pushes through with 2, then separates Black into two groups by cutting at 4.

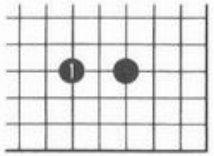

Dia. 25

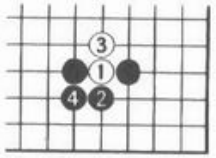

Dia. 26

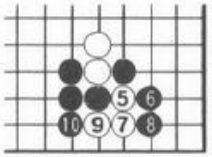

Dia. 27

One-Space Jumps

Black 1 in *Dia. 28* is an example of a one-space jump. On the fourth line from the edge or lower, one-space jumps cannot be separated. For example, if White wedges in between the two black stones with 1 in *Dia. 29*, Black ataris from below with 2. When White extends to 3, Black makes a solid connection with 4. If White now tries to separate the two marked stones by cutting at 5 in *Dia. 30*, Black ataris with 6 and, when White tries to escape with 7 and 9, pursues him with 10. The white stones are left with only two liberties; there is no way they can avoid being captured.

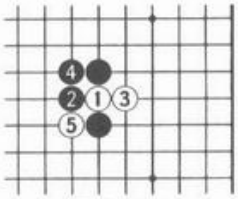

Dia. 28

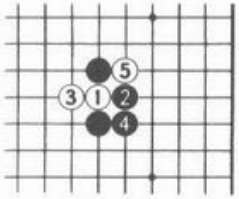

Dia. 29


Dia. 30

Above the fourth line, however, the one-space jump can be separated, as the sequences in *Dias. 31* and *32* illustrate.

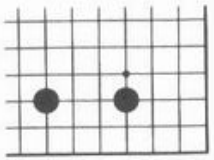
The fact that one-point jumps can be separated is no reason to avoid playing such moves. In fact, one-space jumps are very useful moves because they enable you to develop your stones quickly; you make a trade-off between absolute security and quick development.

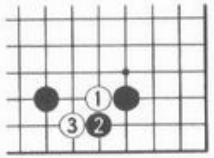

Dia. 31

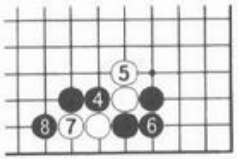

Dia. 32

Two-Space Extensions along the 3rd Line

Two-space extensions along the 3rd line, such as the one shown in *Dia. 33*, also form unbreakable connections. If White tries to separate these two stones by attacking with 1 and 3 in *Dia. 34*, Black will atari with 4 in *Dia. 35*, then connect with 6. If White tries to slip out with 7, Black blocks with 8; the two white stones on the second line have only two liberties, so they cannot escape.

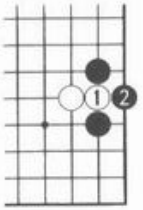

Dia. 33

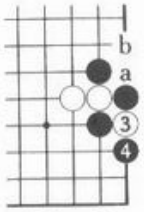

Dia. 34


Dia. 35

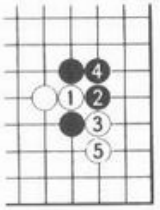
Linking up Your Stones at the Edge of the Board

One-space jumps at the edge of the board cannot be separated even if there is an enemy stone next to the gap separating them. In *Dia. 36*, White pushes in between the two black stones with 1, but Black 2 links them up. If White tries to break through with 3 in *Dia. 37*, Black captures him with 4. If White 3 at 'a', Black captures with 'b'.

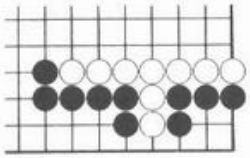

Dia. 36

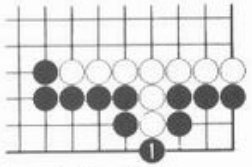


Dia. 37

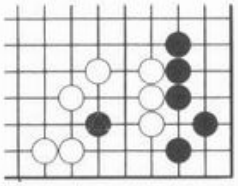

Dia. 38

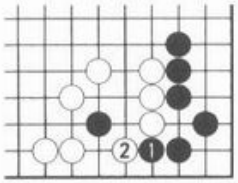
If this position were moved up to the 4th line, Black wouldn't be able to maintain his connection, as *Dia. 38* shows.

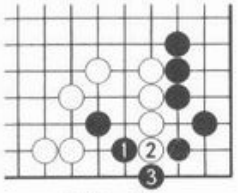

Dia. 39


Dia. 40

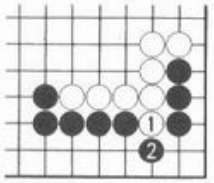
In *Dia. 39*, the group of four black stones on the right is not linked up to the group of six black stones on the left. However, a linkage can be easily made if Black plays 1 in *Dia. 40*.

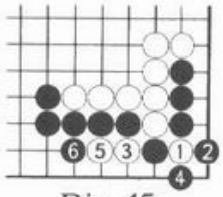

Dia. 41


Dia. 42


Dia. 43

The marked black stone in *Dia. 41* is isolated from its five allies on the right. Trying to link up with 1 in *Dia. 42* fails when White blocks with 2. Black 1 in *Dia. 43*, forming a one-space jump with the marked stone on the right, is the only move that will link up all of Black's stones. If White pushes down with 2, Black links up at the edge of the board with 3.


Dia. 44


Dia. 45

If your positions are strong enough, it is also possible to link up on the second line. When White pushes through with 1 in *Dia. 44*, Black blocks at 2. If White cuts at 1 in *Dia. 45*, Black ataris at 2 and the white stone at 1 cannot escape capture. If White cuts at 3, Black captures a stone with 4. White's stone at 3 has nowhere to go. If it tries to run away with 5, Black blocks his escape with 6 and White is left with only two liberties.

Go in China

Despite having been invented there, go has not always enjoyed a place of honor in modern China. During the recent ten-year 'Cultural Revolution' (1966–76), go was out of favor with zealous Red Guards and their government supporters, although the Chinese government did officially support about thirty go players, classed as 'national sportsmen and sportswomen'. It was not until 1981 that the present, well-supported professional system was initiated. Over the past thirty years, however, there has been an active go exchange between China and Japan consisting of goodwill tours featuring games between Japanese professionals and the top Chinese players. They began in 1960 and, with the exception of a six-year suspension from 1967 through 1972, have continued until the present. The rivalry between Japan and China took on a different character with the introduction in 1984 of the annual Japan–China Super Go knockout team match, which the Chinese have won more often than not. In 1996, Japan's defeat was apparently so humiliating — nearly its entire team was wiped out by the 20-year-old Chang Hao — that the series was canceled.

Regular professional tournaments and title matches began to be held in the late 1970's. The first two were the All-China Championship and the New Physical Education Cup. Then in the late 1980's, a number of titles were established. The Mingren (equivalent to the Japanese Meijin title), Tianyuan (equivalent to the Japanese Tengen title), the Qiwang (Go King), the Pawang (Monarch), and the NEC Cup. Besides these, there is the CCTV Cup, a large-scale lightning TV tournament. At present there are about 100 professionals who compete for these titles, the strongest being Chang Hao 8-dan and Ma Xiaochun 9-dan.

Nie Weiping was the first Chinese player to seriously challenge Japanese supremacy. He made his first appearance on the international scene by winning the first World Amateur Go Championship in 1976 at the age of 24. After that, he quickly proved that he was more than an amateur with a series of wins against some of the strongest Japanese players. On numerous occasions he anchored the Chinese team in the Japan–China Super Go series to save China from defeat by beating the best players that Japan could field. In his prime, Nie dominated the Chinese tournament scene by winning the New Physical Education Cup six times in a row from 1979–83. He also was National champion in 1981, held the Tianyuan, Qiwang titles, the CCTV Cup, and has won the Ten Strongest Players tournament five times.

From the late 1980, a new player began to dominate the Chinese tournament scene: Ma Xiaochun. He has held the Mingren title for seven straight terms, the Qiwang title for four straight terms and the Tengen title for three straight terms.

However, a new generation of players are beginning to emerge, the foremost of whom is Chang Hao. In 1997, he defeated Ma Xiaochun in the Tianyuan title match. He then defeated Ryu Shikun, the holder of the Japanese Tengen title, in a best-of-three match by winning two straight games.

Two other young professionals, Zhou Heyang (21) and Wang Lei (19) have achieved significant successes not only in Chinese tournaments but also in international tournaments.

China also has the strongest woman player in the world, Rui Naiwei 9-dan. She has consistently beaten strong Japanese players and has won the World Women's Championship on a number of occasions. She now lives in the United States with her husband Jiang Zhujiu, who is also a 9-dan, where they are teaching go to young Americans.

In spite of the short history of China's professional go program, there is no gap between the playing strength of the top Chinese players and that of the top Japanese and Korean players. How did the Chinese become so strong so fast?

In addition to support from the national and local governments, which sponsor professional and amateur go in state and city social clubs as well as in public schools, elementary through high school,

Chinese professionals say that they have learned a lot from Japanese professionals who acted as tutors during the early years of the Japan–China go exchange programs. And, indeed, because the Japanese developed go theory to its present high level over the last 400 years, Chinese professionals were able to begin their theoretical studies at the top.

Another reason, of course, is that go is a very popular game in China. One current estimate puts the number of amateur players at somewhere around 10 million, up from a reported one million fifteen years ago. As in Japan, children are often taught to play go before they are old enough to enter primary school. Talented young players have a chance to compete for local and national titles at the elementary, junior high, and high school levels, as well as at the city and national levels.

In order to become a professional go player in China, one must enter a competition. From among the top players in that competition, future professionals are chosen by high-level players from the state social clubs. Once chosen, low-ranked players study go by themselves; high-ranked players, 5-dan and above, study together. This differs from Japan, where low-level players become apprenticed to high-level professionals.

Below is a list of the major Chinese titles and the current title holders.

Pawang (Monarch) title – Wang Lei 6-dan
Mingren (Meijin) title – Ma Xiaochun 9-dan
Tianyuan (Tengen) – Chang Hao 8-dan
Friendship Cup – Ma Xiaochun
National Championship – Ma Xiaochun
Five Cow Cup – Zhang Wendong 9-dan
Qiwang (King of Go) title – Ma Xiaochun
All-China Championship – Zhou Heyang 6-dan
CCTV Lightning Go Cup – Nie Weiping 9-dan
NEC Cup – Xiao Weigang 8-dan

Go in Korea

Although go (called Paduk in Korea) was played in Korea long before it arrived in Japan, it is only since 1956 that it has been played professionally there. In Korea, go has traditionally been regarded only as a pastime or a gambling game, but in 1980 it was officially recognized by the government as an important cultural asset.

The Korean Go Association (Han Kuk Kiwon) was founded almost single-handedly in September 1955 by Cho Nam-chul 9-dan. As of August 1997 there were 146 professional players competing for prizes in eight open newspaper tournaments and three TV tournaments. The top Korean titles in order of their importance and the present (1997) title holders are as follows. The winner's purse is shown in Korean won. As of September 1997, the dollar–won exchange rate was about $1 = 905 won.

1. Myungin (Meijin) – Lee Chang-ho; 40,000,000 won
2. Tekron Cup – Yoo Chang-hyuk; 40,000,000 won
3. Wangwi (King Position) – Lee Chang-ho; 35,000,000 won
4. Kisung (Kisei) – Lee Chang-ho 25,000,000 won
5. SBS TV Tournament – Yoo Chang-hyuk; 20,000,000 won
6. Wangki (King of Go) – Lee Chang-ho; 20,000,000 won
7. Guksu (National Champion) – Lee Chang-ho; 18,000,000 won
8. Kiwang (Go King) – Cho Hoon-hyun; 12,000,000 won
9. Paewang (Monarch) – Cho Hoon-hyun; 12,000,000 won
10. Bacchus Cup: Chun Won (Tengen Title) – Lee Chang-ho; 11,000,000 won
11. Gukgi (National Go Championship) – Lee Chang-ho; 11,100,000 won
12. Paduk Wang (King of Paduk) KBS-TV (Lightning Go TV Tournament – Yoo Chang-hyuk; 11,000,000 won
13. Chaigowi (Top Position) – Lee Chang-ho; 10,000,000 won
14. Daewang (Great King) – Lee chang-ho; 8,000,000 won

From the middle of the 1970s, the player who dominated the Korean titles was Cho Hoon-hyun 9-dan. In his youth, Cho studied in Japan, but instead of making his career there, he returned to Korea with the intention of raising the strength of his compatriots. His efforts have borne fruit. His disciple, Lee Chang-ho, at the age of 21, is clearly the strongest player in Korea and some think the strongest in the world. He presently holds a majority of the Korean titles. Another Korean title-holder, Yoo Chang-hyuk, is also a disciple Cho Hoon-hyun.

Because of Lee Chang-ho's spectacular successes in domestic Korean tournaments as well as in the international go arena, he has become a hero in is native land and he has ignited a huge following, somewhat like that of a rock star. This has caused a surge in the popularity of go in Korea. Large companies are pouring in vast amounts of money into international tournaments and a legion of young prodigies are emerging. It has been predicted that in ten years, Korea will be the pre-eminent go-playing country in the world.

International Tournaments

As mentioned earlier, the first professional international tournament was the Fujitsu Cup, first held in 1988 and dubbed the World Go Championship. The following year, the Ing Cup was established. This was an every-four-year event, but the winner's prize was $400,000, so it attracted a lot of interest when it was first held. Then in 1990, the Tong Yang Securities Cup was transformed from being a solely Korean affair to an international tournament.

In 1996, two tournaments were founded by Korean companies. The first was the LG Cup offering a first prize of about $225,000. Quickly following on the heels of this tournament came the Samsung Cup. This last tournament is unique in that it is an open tournament where anyone can compete to join the seeded players in the main tournament, but all competitors in the preliminaries must pay their own expenses, something unheard-of in a professional tournament. For every win in the preliminaries, there is some prize money, about $1,000. The big lure, however, is the $400,000 prize for the winner.

Below is a list of the main international tournaments, the current (August 1997) champions, and prize money:

Samsung Cup – Yoda Norimoto (Japan); $400,000

Ing Cup – Yoo Chang-hyuk (Korea); $400,000. Held every four years.

LG Cup – Lee Chang-ho (Korea); 200,000,000 won (about $225,000)

Fujitsu Cup – Kobayashi Koichi (Japan); 20,000,000 yen (about $170,000)

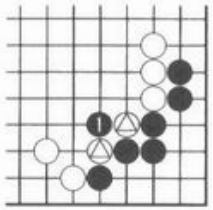
Tong Yang Securities Cup – Cho Hoon-hyun (Korea) 120,000,000 won (about $135,000)

Chapter Six
Capturing Techniques

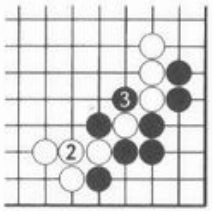
Although capturing stones is not the main objective of go, capturing a group of stones, or even just one key stone, will often help you in the main quest of the game: taking more territory than your opponent. In this chapter we will show you a few elementary capturing techniques.

Double Atari

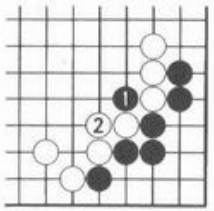
When you atari two different stones, or two different groups of stones, at the same time, you will usually be able to capture something. Black 1 in *Dia. 1* is an example of a double atari. This move simultaneously ataris the two marked stones; White is able to defend only one of them. If he connects at 2 in *Dia. 2*, Black captures at 3, breaking through White's position. Giving atari to only one stone with Black 1 in *Dia. 3* fails to capture anything. White connects at 2 and Black has no follow-up.



Dia. 1

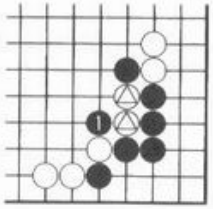


Dia. 2

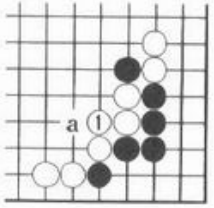


Dia. 3

Black 1 in *Dia. 4* is another example of double atari. This time Black gives atari to a group of two stones (the two marked ones) and one stone. If this were to happen in a game, White would suffer a big loss, so White would have to forestall this by connecting at 1 or 'a' in *Dia. 5*.

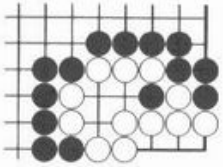


Dia. 4

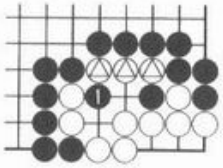


Dia. 5

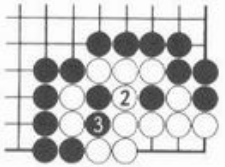
Look at the position in *Dia. 6* and see if you can spot a black move which is double atari.



Dia. 6

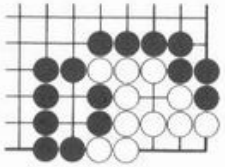


Dia. 7

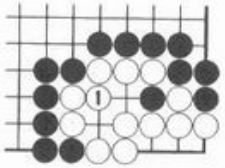


Dia. 8

Black 1 in *Dia. 7* ataris the three marked stones and the two stones on the left. Black must give up one of these two groups, so he saves his three-stone group by capturing one black stone with 2 in *Dia. 8*. Next, Black captures two white stones with 3. The result is shown in *Dia. 9*. If it were White's turn to play, he could defend against this double atari by playing at 1 in *Dia. 10*.



Dia. 9

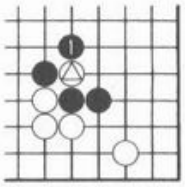


Dia. 10

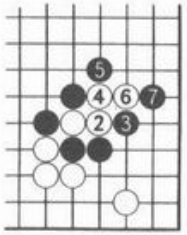
Ladders

Ladders are a basic capturing technique. *Dia. 11* shows a typical position in which a ladder occurs. If Black plays 1, the marked

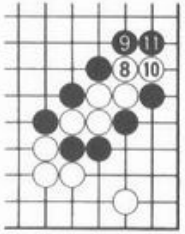
white stone cannot escape capture. If White tries to escape from atari by extending to 2 in *Dia. 12*, Black ataris with 3. If White persists in trying to escape with 4 and 6, Black keeps White to one liberty with 5 and 7. After White 8 in *Dia. 13*, Black drives White toward the edge of the board with 9 and 11, from where there is no escape.



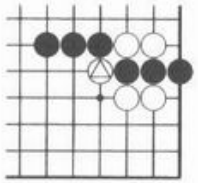
Dia. 11



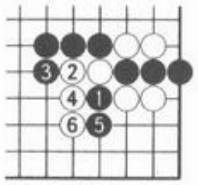
Dia. 12



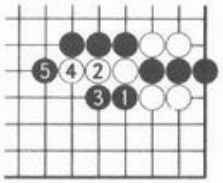
Dia. 13



Dia. 14

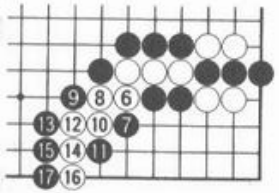


Dia. 15

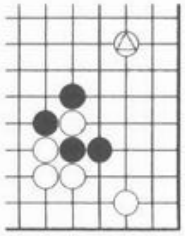


Dia. 16

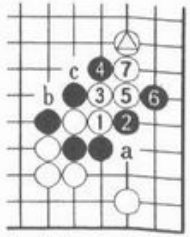
Look at the position in *Dia. 14*. The three black stones on the right have only two liberties and are about to be captured. The only way Black can avoid this is to capture the marked white stone. It is clear that the only way this stone can be captured is with a ladder, but he must set up the ladder correctly. If he hastily plays 3 in *Dia. 15*, White plays 4, giving atari to the black stone at 1, and White escapes the ladder. Therefore, Black must play 3 in *Dia. 16*. When White extends to 4, Black 5 starts the ladder. *Dia. 17* shows the continuation.



Dia. 17



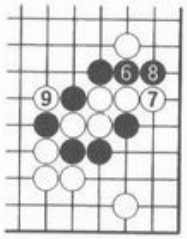
Dia. 18



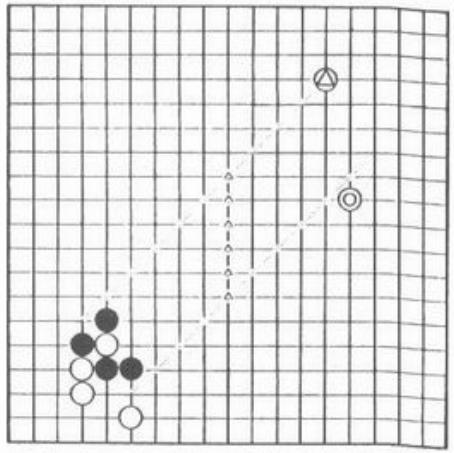
Dia. 19

When you set up a ladder, you must make sure that your opponent doesn't have any stones in its path. In *Dia. 18*, the marked stone lies in the path of the ladder, so White can escape with 1 in *Dia. 19*. If Black pursues him by playing 2, 4, and 6, White links up to his marked stone with 7; next he can a play double atari at 'a', 'b', or 'c'.

If Black tries to skirt the offending stone with 6 in *Dia. 20*, White plays 7 and gets three liberties. After Black 8, the double-atari of White 9 enables the white stones to escape.



Dia. 20

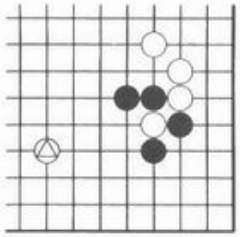


Dia. 21

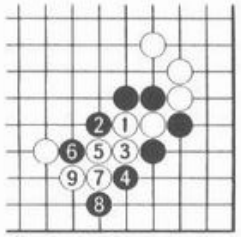
Dia. 21 shows a ladder along with a triangled and a circled white stone. From the ladder there are two broken lines. If any white stones fall on these lines or within these lines, Black cannot capture the endangered white stone in a ladder, since those stones act as a ladder block. The circled white stone is outside the broken line, so

it has no effect on the ladder. By tracing out such lines with your eye in your games, you can quickly determine whether or not the ladder is favorable.

In *Dia. 22*, the marked stone blocks the ladder. White's stones do not run into this stone, but it breaks the ladder because White 9 in *Dia. 23* is atari. The ladder doesn't work so Black must not play it or he will suffer a big loss.

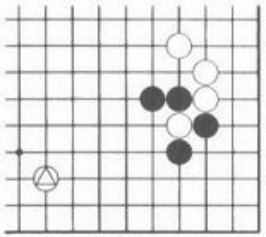


Dia. 22

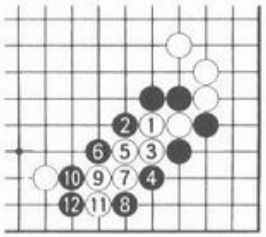


Dia. 23

In *Dia. 24*, the marked stone falls in the path of the ladder, but since it is near the edge, Black's ladder still works. After White 9 in *Dia. 25*, Black drives White to the edge with 10 and 12, where he cannot escape.

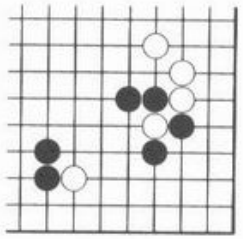


Dia. 24

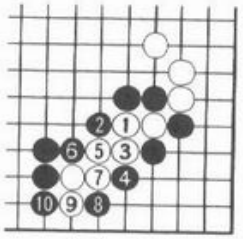


Dia. 25

Sometimes, even when an opposing stone lies in the path of your ladder, the ladder can still be effective, if some of your own stones are nearby. Such is the case in *Dia. 26*, where the white stone on the left is next to two black stones. The ladder is shown in *Dia. 27*. White 7 links up with the marked stone, but Black still captures the white stones in a ladder after Black 10.

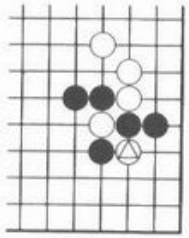


Dia. 26

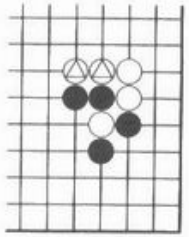


Dia. 27

Diagrams 28 and *29* show examples where the ladders do not work because of the presence of the marked white stones. Black can't capture either white stone in a ladder. We leave it to the reader to verify this.



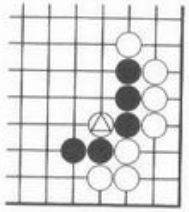
Dia. 28



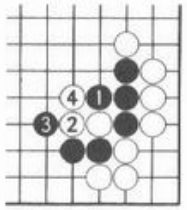
Dia. 29

Nets

Nets are another kind of capturing technique. *Dia. 30* is an example. Black would like to capture the marked white stone. If he simply ataris with 1 in *Dia. 31*, trying to set up a ladder, White escapes with 2. If Black persists in pursuing White with 3, White ataris with 4 and it is the four black stones that now find themselves caught in a ladder.

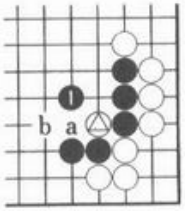


Dia. 30

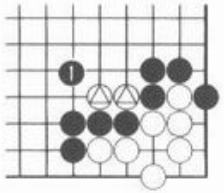


Dia. 31

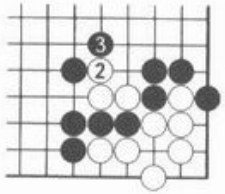
Black 1 in *Dia. 32* is the move that secures the capture. By jumping ahead of the white stone, Black catches it much the same way one would cast a net to catch a wild animal. There is no escape for the marked white stone. If White tries to sneak out with 'a', Black ataris with 'b'.



Dia. 32

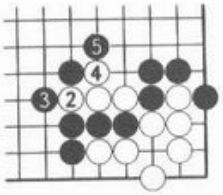


Dia. 33

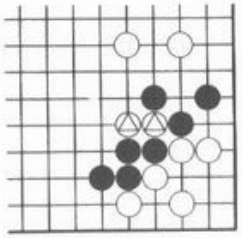


Dia. 34

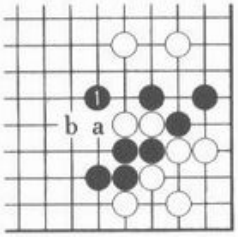
Black 1 in *Dia. 33* is another example. This move catches the two marked stones. You may think that White has enough liberties to escape, but his attempts in *Dias. 34* and *35* to break through this net fail.



Dia. 35

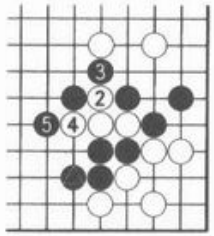


Dia. 36

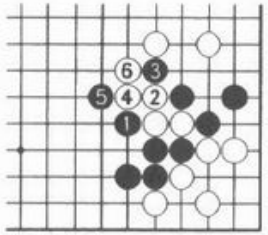


Dia. 37

Capturing the two marked stones in *Dia. 36* may seem impossible, but if Black casts a net with 1 in *Dia. 37*, the two white stones will be captured. If White 'a', Black 'b'. Trying to break out with 2 and 4 in *Dia. 38* fails; no matter in which order White plays these moves, he can't escape. Note that the presence of the marked black stone is essential for this net to work.



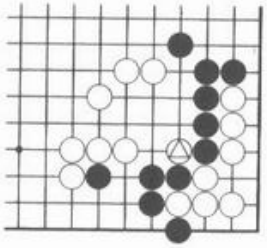
Dia. 38



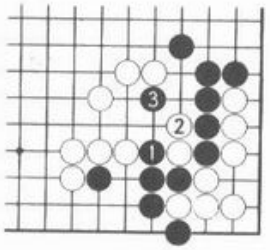
Dia. 39

If Black directly ataris with 1 in *Dia. 39*, hoping to get a ladder, White runs right into his allies above and ataris a black stone when he plays 6.

In *Dia. 40*, the marked stone is separating Black's two groups. Black has to capture this stone or his stones at the bottom will die. Black first ataris with 1 in *Dia. 41*. If White plays 2, Black 3 catches two stones in a net.



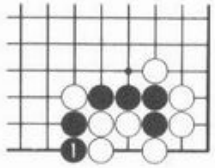
Dia. 40

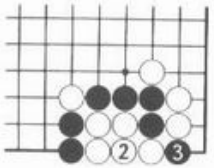


Dia. 41

Sacrifice Techniques

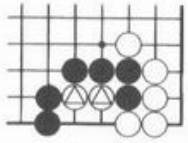
Sometimes it is possible to sacrifice stones in order to capture many more of your opponent's. In this section, we will look at some of these sacrifice techniques. First of all, let's look at a special kind of atari.

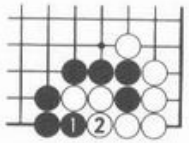

Dia. 42

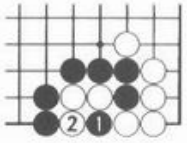

Dia. 43

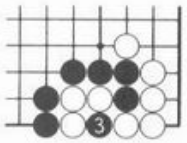
In *Dia. 42*, Black ataris three white stones with 1. Notice that there is no way White can get out of atari. If he connects at 2 in *Dia. 43*, he is still in atari so Black can capture with 3.

Sometimes a situation similar to the one in *Dia. 42* can be created by sacrificing a stone. In *Dia. 44*, for example, Black would like to capture the two marked white stones. If he simply plays 1 in *Dia. 45*, White will connect at 2 and Black cannot capture anything.

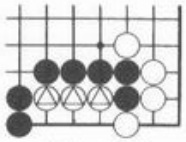

Dia. 44

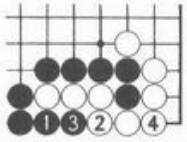

Dia. 45

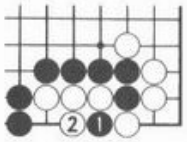

Dia. 46

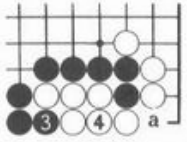

Dia. 47

Instead, Black first sacrifices a stone by throwing in at 1 in *Dia. 46*. Even if White captures this stone with 2, Black captures three stones by playing 3 in *Dia. 47*.


Dia. 48

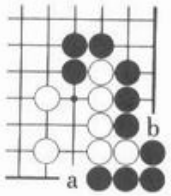

Dia. 49

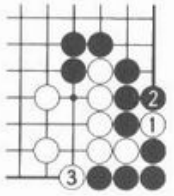

Dia. 50

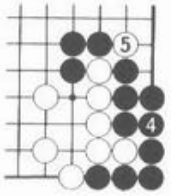

Dia. 51

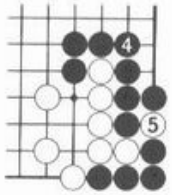
In *Dia. 48* Black would like to capture the three marked white stones. Simply playing 1 and 3 in *Dia. 49* fails when White connects with 2 and 4. But if he first sacrifices a stone with 1 in *Dia. 50*, after White captures with 2, Black 3 in *Dia. 51* will capture four white stones. Even if White connects at 4, he is still in atari (Black can capture at 'a').

Dia. 52 is a bit different, but the principle is the same. If White ataris at 'a', Black will connect at 'b' and all of his stones are safe. The situation becomes different, however, if White first sacrifices a stone with 1 in *Dia. 53*, then ataris with 3. If Black connects at 4 in *Dia. 54*, White ataris at 5 and there is no way for the nine black stones to get out of atari. Black would therefore limit his loss to the four stones in the corner and connect at 4 in *Dia. 55*.

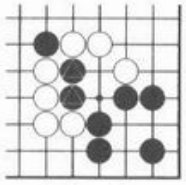

Dia. 52

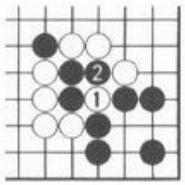

Dia. 53

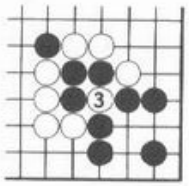

Dia. 54


Dia. 55

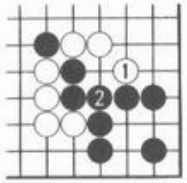
In the position in *Dia. 56*, White can capture the two marked black stones. He does this by sacrificing a stone at 1 in *Dia. 57*. Even if Black captures at 2, he cannot get out of atari. He just fills in one of his own liberties, so White can capture Black's three stones with 3 in *Dia. 58*. This kind of capture is known as a snapback.


Dia. 56

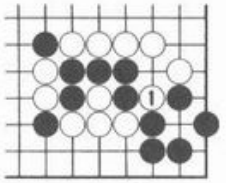

Dia. 57


Dia. 58

The situation in *Dia. 56* arose when White played 1 in *Dia. 59*. The only defense for Black is 2.

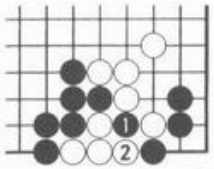


Dia. 59

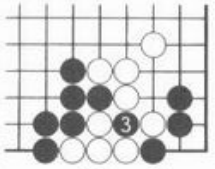


Dia. 60

White 1 in *Dia. 60* is another example of a snapback. In this case, five black stones are captured.



Dia. 61



Dia. 62

Dia. 61 shows an example of a snapback at the edge of the board. For White to capture the black stone at 1 by playing 2 would not get him out of atari: Black comes back and plays 3 in *Dia. 62*, capturing four white stones.

Go Around the World

Go is enjoyed around the world as much as it is in Asia (refer to the list of Go associations at the end of this book), although its history in the West is much shorter. Several descriptions of go were published in Europe during the 17th century; in Italian (1610), Latin (1615), German (1616), English (1617), and Dutch (1665). While these texts described the game, they did not show their readers how to actually play. By the late 19th and early 20th century, however, there appeared texts in German (Korschelt: *The Theory and Practice of Go*) and in English (Smith: *The Game of Go*) that provided western readers with basic instruction in the game. Currently there are go clubs on every continent in the world, but the main concentration of players outside the orient is in Europe and North America. The European Go Federation, consisting of most of the countries of Western and Eastern Europe, sponsors the European Championship and the European Computer Go Championship. These events are held as part of the European Go Congress every summer. Other tournament activities, including the numerous national championships and other local events, throughout the year have been so intense that beginning in 1987 the Grand prix d'Europe, incorporating the ten largest and most prestigious tournaments, was inaugurated. The base of this activity is the large number of go clubs in every major city and in almost every medium-size town throughout Europe.

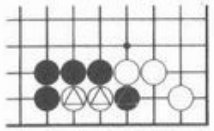
As in Europe, the number of go players in the U.S. and Canada has shown explosive growth. In the United States, the annual summer American Go Congress, organized by the American Go Association, is the premier event. Coupled with the growth of American go, a number of professionals from Korea and China have taken up residence in the U.S. and are actively teaching go. In the San Francisco bay area, the world's strongest woman player,

Rui Naiwei 9-dan, and her husband Jiang Zhujiu 9-dan have established a go school with the aim of training young American players. In addition, two native-born Americans have attained professional rankings through their study in Japan and Korea and returned home to teach go. As in Europe, there are go clubs in every major city as well as many medium-size cities throughout the U.S. and Canada.

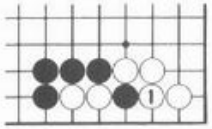
The yearly culmination of all this international go activity is the World Amateur Go Championship, held under the auspices of the International Go Federation in Japan every spring. In 1997, the top amateur players from 46 countries competed to determine who was the strongest. Representatives came from North, Central, and South America, Eastern and Western Europe, Southeast and Southwest Asia, Australia and New Zealand, the Middle East, and Africa, as well as from East Asia.

Chapter Seven
Capturing Races

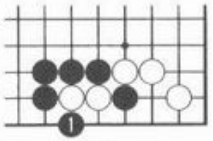
It often happens that two opposing groups of stones become involved in a race to capture each other. The position in *Dia. 1* is an example. The two marked white stones have two liberties and the marked black stone also has two liberties. Whoever moves first will capture the other. If White plays 1 first in *Dia. 2*, the black stone will be captured on the next move; there is nothing that Black can do to prevent it. On the other hand, if Black plays 1 in *Dia. 3*, he will capture two white stones. White could atari the black stone with 2 in *Dia. 4*, but Black 3 captures the two white stones and the capturing race is over.



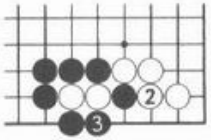
Dia. 1



Dia. 2



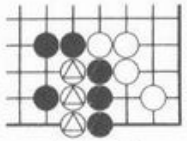
Dia. 3

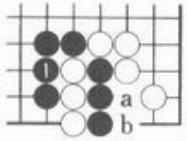


Dia. 4

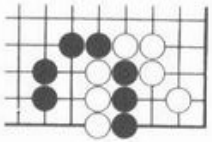
The position in *Dia. 5* (next page) is another example of a capturing race. This time it involves the three marked black and three marked white stones with two liberties each. Black can win

the capturing race by playing 1 in *Dia. 6*. This move ataris three white stones, while the three black stones on the right still have two liberties, at 'a' and 'b'.

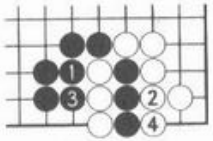

Dia. 5



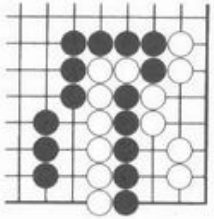
Dia. 6

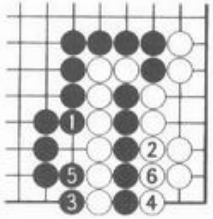

Dia. 7

In the position in *Dia. 7*, the group of three white stones on the left have three liberties and the group of three black stones on the right have two liberties. Even if Black plays first, he loses the capturing race. That is, if Black plays 1 in *Dia. 8*, White ataris with 2. If Black 3, White captures the three black stones with 4, winning the capturing race.



Dia. 8


Dia. 9

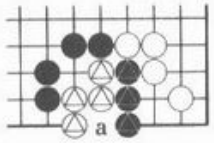


Dia. 10

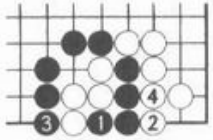
Dia. 9 shows a capturing race where White has four liberties to Black's three. Even if Black moves first, he loses the race, as the sequence to White 6 in *Dia. 10* illustrates.

Inside Liberties and Outside Liberties

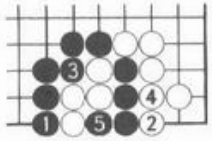
From these examples you may think that if you have more liberties than your opponent, all you have to do to win the capturing race is to fill in the liberties of your opponent's group. However, there are times when a bit of care is required.



Dia. 11



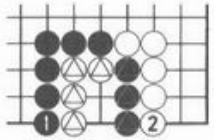
Dia. 12



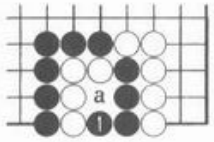
Dia. 13

In *Dia. 11*, for example, both the black and white marked stones have three liberties and you would think that whichever side moved first would win the capturing race. But notice that they share a liberty at 'a' in common. This kind of liberty is called an inside liberty. If Black fills this inside liberty by playing 1 in *Dia. 12*, he loses the capturing race when White ataris at 2 and captures with 4. To win this capturing race, Black should first fill the outside liberties with 1 and 3 in *Dia. 13*; after White ataris with 4, he can capture White by playing the inside liberty with 5.

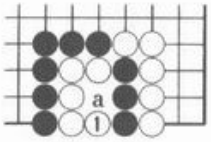
The point to remember here is that when your stones are caught in a capturing race, you should always fill in the outside liberties first and finally make the capture by occupying the inside liberty.



Dia. 14



Dia. 15



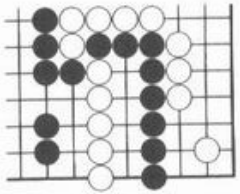
Dia. 16

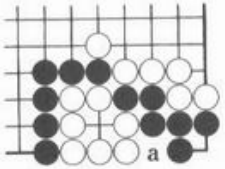
Seki

Sometimes in a capturing race a situation occurs in which neither side can capture the other. An example of this is shown in *Dia. 14*. The two marked black and white groups are locked in a capturing race. Black and White each fill an outside liberty with 1 and 2. There are now two inside liberties remaining. However, if Black ataris with 1 in *Dia. 15*, he also puts himself into atari, so White would capture with 'a'. For the same reason, White cannot play at 1 in *Dia. 16*, since he would also put himself into atari and be captured by Black 'a'. Therefore, whichever side attacks in this

position loses his stones; it is better to sit tight and do nothing. At the end of the game, both groups remain on the board and the points between them are not counted as territory. This position is called 'seki' in Japanese.

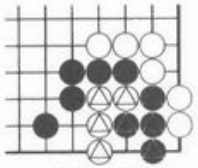
Dia. 17 shows another example. Fill the outside liberties and verify for yourself that this is a seki.

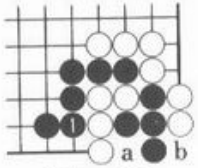

Dia. 17



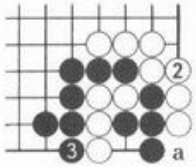
Dia. 18

Sekis also arise when both embattled groups contain real eyes. In *Dia. 18*, each of the black and white groups has an eye and a common liberty at 'a'. But this is still a seki; neither side can play at 'a' without putting his stones into atari.


Dia. 19



Dia. 20

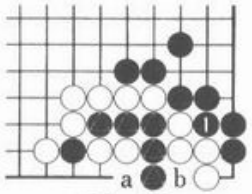


Dia. 21

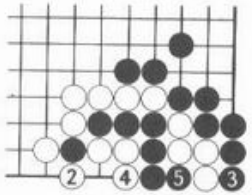
Shortage of Liberties

The two marked groups in *Dia. 19* are locked in a capturing race. White has three liberties while Black has only two. You might think that White wins this capturing race, but it is Black who wins it if it is his turn. If Black plays 1 in *Dia. 20*, White can't atari at 'a', nor can he atari at 'b'; in both cases he would put himself into atari. In such situations we say that White is 'short of liberties'. Before White can atari at 'a' in *Dia. 21*, he must first play 2, but then Black wins the capturing race when he ataris with 3.

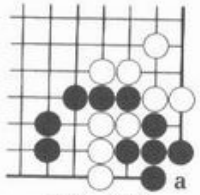
Dia. 22 is another example of shortage of liberties. After Black plays 1, White finds himself short of liberties. That is, he is unable to atari the five marked black stones at 'a' or 'b' without putting his own stones into atari. White must first capture a black stone with 2 in *Dia. 23*, but then Black ataris at 3; White's atari at 4 comes too late, since Black captures four white stones with 5, ending the capturing race.



Dia. 22



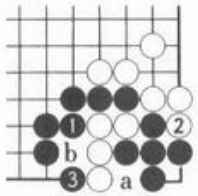
Dia. 23



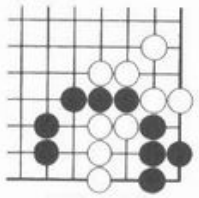
Dia. 24

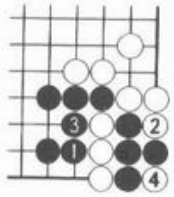
One Eye Beats No Eye

In a capturing race, if one side's embattled group has a real eye and the other side doesn't, the side whose group has the real eye will usually find himself with the advantage. In *Dia. 24*, the black group in the corner has a real eye at 'a'. The marked white stones have four liberties as opposed to three for Black (counting the real eye). Black starts the capturing race with 1 in *Dia. 25*, and after 3 the white stones are dead. It is not even necessary for Black to actually capture these stones; he can pick them up at the end of the game as his prisoners without making the capturing moves at 'a' and 'b'. White can do nothing, since he puts himself into atari if he plays at 'a'.



Dia. 25


Dia. 26



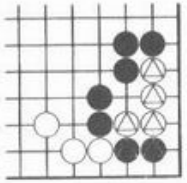
Dia. 27

The position in *Dia. 26* is also a victory for Black. Even if White moves first, he cannot win the capturing race. Verify this for yourself as an exercise.

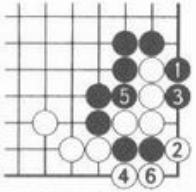
If you are going to use an eye to your advantage in a capturing race, it is important that there be some inside liberties between the groups fighting out the race. In *Dia. 26* there were two inside liberties and Black won the capturing race even when White moved first. But if you take away those two inside liberties, then Black loses the capturing race even if Black moves first, as *Dia. 27* shows.

Increasing Your Liberties in a Capturing Race

It is sometimes possible to increase your liberties in a capturing race with a move that does not fill in your opponent's liberties. Look at the position in *Dia. 28*, where the two marked groups are caught up in a capturing race.



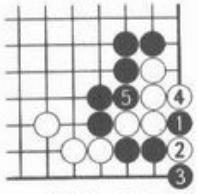
Dia. 28



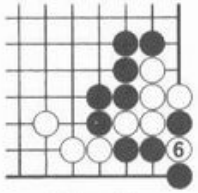
Dia. 29

If Black begins by filling a white liberty with 1 in *Dia. 29*, he loses the capturing race, as the moves to White 6 show.

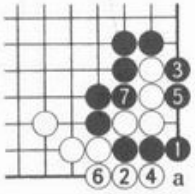
Black could turn the situation into a ko by starting on the other side with 1 in *Dia. 30*. The ko begins with White 6 in *Dia. 31*, but Black can do better.



Dia. 30



Dia. 31

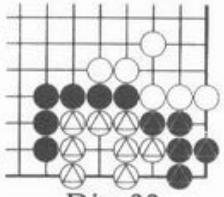


Dia. 32

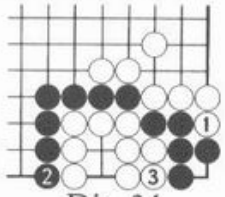
The best move is to descend to the edge with Black 1 in *Dia. 32*. Playing out the capturing race, we see that before White can atari at 'a', he must first play 6 (another example of being short of liberties), but then Black gets to atari first with 7, winning the capturing race.

The Value of Eye Spaces

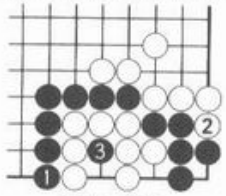
The capturing race between the marked black and white groups in *Dia. 33* is rather easy to work out, but notice that while Black has a real eye, White has a two-point eye space. If White plays first, he wins the capturing race by one move, as *Dia. 34* illustrates.



Dia. 33

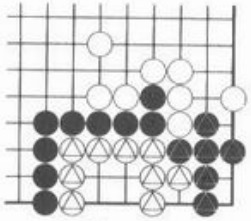


Dia. 34

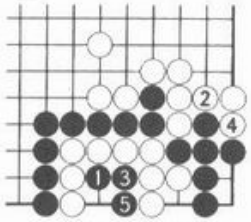


Dia. 35

If Black moves first in *Dia. 35*, he can turn the situation into a seki by sacrificing a stone at 3. At the end of the game, White can capture this stone (the situation will still remain a seki) and add it to his prisoner pile, so having a big eye gains White at least one point.



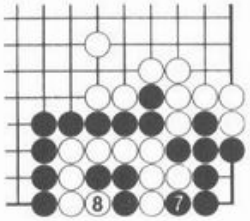
Dia. 36



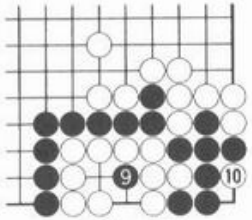
Dia. 37

In the capturing race in *Dia. 36*, both the marked black and white groups have five liberties, but White has a four-point eye space as opposed to Black's two-point eye space. Even if Black moves first, the larger eye space gives White the advantage in this capturing race. If Black starts the capturing race with 1 and 3 in *Dia. 37*, White fills two of Black's outside liberties with 2 and 4. Black next plays

5, but White can ignore this move and play 6 elsewhere. If Black persists and ataris with 7 in *Dia. 38*, White captures with 8. From *Dia. 39* the result is clear: three liberties for White, two liberties for Black. If Black plays 9, White ataris with 10,winning the capturing race.



Dia. 38



Dia. 39

In conclusion, an eye space gives you an advantage in a capturing race. The larger your space is, the more moves it takes to fill up its liberties because once your opponent has filled all the liberties of the eye space, you can capture his stones and he must start out all over again filling up those same liberties. In other words, it takes him more than one move to take away one liberty.

Go Equipment

The equipment with which go is played is steeped in tradition. The size of the board and stones and the materials used to make them have remained unchanged for centuries. Modern technology has had little effect on the traditional methods used to make high-quality go boards. The best boards are still handmade by master craftsmen who have inherited the art from their fathers and, perhaps, a few generations of master go-board-maker grandfathers before them.

The standard dimensions of the go board are 454 mm in length by 424 mm in width. The thickness of boards with legs varies from 50 mm to as much as 240 mm; however, the usual thickness for such boards is between 150 mm and 190 mm. The standard height for go board legs is 121 mm.

The black stones are 21 mm in diameter and the white stones 20 mm. The white stones are a bit smaller in order to compensate for the optical illusion that makes the black stones appear smaller than they are. The stones are convex in shape and vary in thickness from 5 mm to as much as 12.8 mm, according to taste. However, the preferred thickness seems to be between 8.4 mm and 9.5 mm. Fatter stones are rather unwieldy to play with, and much thinner ones somehow don't feel satisfying.

The finest go boards are made from the highly lustrous, close-grained wood of 700- to 1,000-year-old Japanese kaya (*torrea nucifera*) trees. This yellowish wood is ideal for go boards because its color harmonizes with the black and white stones and because it produces a pleasing 'live' sound when a stone is resolutely placed on the board. Kaya boards are resistant to decay, and the color of the wood becomes deeper and richer with age.

The quality and, therefore, the price of kaya go boards are determined by a number of factors, the most important of which is the cut of the wood. There are different ways of sectioning kaya

wood for go boards, each of which produces a distinctive combination of playing surface, end-grain, side-grain, and bottom-grain patterns. The most desirable boards have straight surface grains. Other factors that determine price and quality are flaws, such as knots, discolorations, etc., the character of the wood, and how long the wood has been seasoned. Another important factor is that top-quality boards can be made only from kaya trees that are between 700 and 1000 years old. Naturally, such trees are scarce, so good quality kaya go boards are very expensive. Prices start at around US$12,000 and can cost hundreds of thousands of dollars for the finest boards. Low-quality traditional boards can be purchased for as little as $200.

Because kaya boards are so rare and expensive, the most widely used wood for go boards is katsura (*cercidiphyllum japonicum*). Boards made of this wood are reasonably priced and are, therefore, the preferred type for use in go clubs in Japan. Recently, wood from trees native to Canada, the United States, and Indonesia have been used to make reasonably-priced good-quality boards for use in Japan and other countries. Although it is not absolutely necessary to have a wooden go board to play on, most go players find that one of the pleasures of the game is hearing the resonant sound produced when a stone is placed on the board.

Go stones are traditionally made from clam shells (*hamaguri*, in Japanese) that come from Hyuga in Miyazaki prefecture, Japan. As with kaya trees, so too with these clam shells: they have become very scarce and very expensive. As a result, clam shells from Lower California in Mexico are now being used to make good-quality shell stones at a fraction of the cost of a set of stones from Hyuga. Since shell and slate stones are fairly expensive, most go clubs and many individual go players use stones made of high-quality, chip-resistant glass. At the lower end of the scale are plastic stones.

Stones are usually kept in round wooden bowls with lids. The most expensive bowls are made of a beautiful mulberry wood, found only on Miyake island in Japan, and they can cost thousands of dollars. Most bowls, though, are made of more reasonably

priced types of wood, such as keyaki, cherrywood, or chestnut. Plastic bowls are also widely used.

In addition to full-sized go sets, small magnetic sets, ideal for traveling, are also readily available at reasonable prices. These sets have folding metal boards and plastic stones, each of which contains a small magnet.

As a last resort, until you find the set that is just right for you, it is possible to make and use your own cloth or paper board and to use black and white buttons in place of stones.

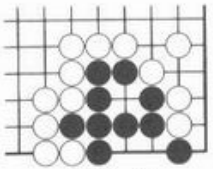
A large variety of go sets are available through Kiseido or its agent in Europe, Schaak en Gowinkel het Paard. See page 135 for the contact addresses.

Chapter Eight
Life and Death

One of the most important techniques to learn in order to become a strong player is killing your opponent's groups and saving your own endangered groups. This means either preventing your opponent's group from making two eyes or making two eyes for your own. In this chapter, we will show you some of the techniques used to keep a group from making two eyes while showing you how to make two eyes for your own groups.

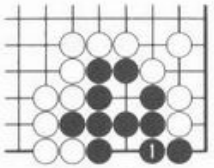
Creating False Eyes

What is the status of the black group in *Dia. 1*? It certainly has a real eye on the third line, but does it have a real eye at the edge? If it is Black's turn, where should he play? If it is White's turn, where should he play?

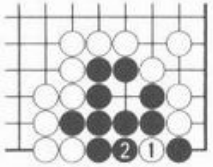


Dia. 1

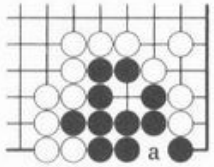
Black 1 in *Dia. 2* is the vital point. If Black plays here, he has two real eyes and cannot be killed.



Dia. 2



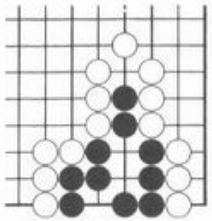
Dia. 3



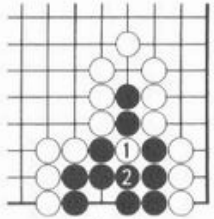
Dia. 4

If it were White's turn, he would throw in a stone at 1 in *Dia. 3*. If Black captures at 2, the result is shown in *Dia. 4*. The point 'a' is a false eye, so Black is dead.

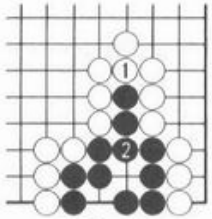
In the position in *Dia. 5*, Black's group does not yet have two real eyes. If White throws in a stone at 1 in *Dia. 6*, the point 1 becomes a false eye after Black captures at 2, so Black dies.



Dia. 5



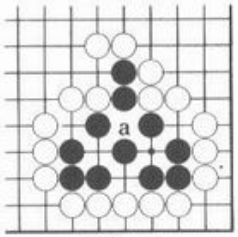
Dia. 6



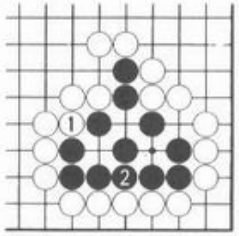
Dia. 7

White 1 in *Dia. 7* would only help Black to make two eyes by encouraging him to defend at 2.

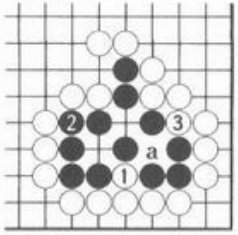
Finding the move to prevent Black from making two eyes in *Dia. 8* is a more difficult (the point 'a' is already a false eye). White 1 in *Dia. 9*, enables Black to get two eyes when he plays 2. From this you can see that 2 is the vital point, so the way to kill Black is to play 1 in *Dia. 10*. If Black 2, White plays 3 and the point 'a' becomes a false eye. Black now has only one real eye and two false eyes, so he is dead.



Dia. 8

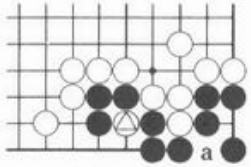


Dia. 9



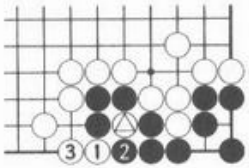
Dia. 10

Dia. 11 is an interesting example. It is White's turn to play. Black has one real eye and one false eye (at 'a') in the corner. It looks as if Black will get his second real eye when he captures the marked white stone, but —



Dia. 11

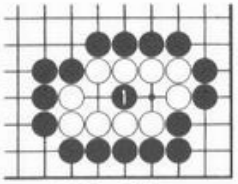
White ataris at 1 in *Dia. 12*, forcing Black to capture at 2. After White 3, the point where the marked stone was becomes a false eye, so Black's group is dead.



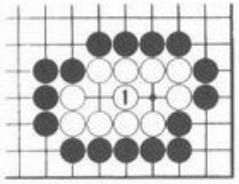
Dia. 12

Placement Moves

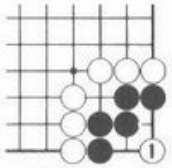
Placement moves are an important technique in killing groups. The aim is to create an eye space that cannot become two eyes. *Dia. 13* shows the simplest example. Black plays right in the middle of White's three-point eye space. If you have read Chapter Three carefully, you will understand that White's group is dead. White, however, can get two eyes and live by playing 1 in *Dia. 14*.



Dia. 13

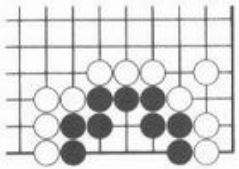


Dia. 14

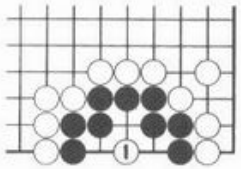


Dia. 15

Dia. 15 shows White making a placement move right in the middle of Black's three-point eye space. Black's group is dead. The black group could live, however, if he were to play on the point 1 himself.



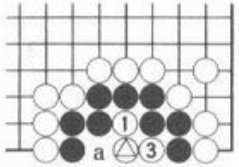
Dia. 16



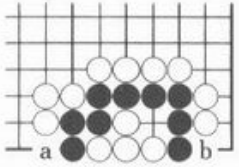
Dia. 17

In *Dia. 16*, Black has a four-point eye space. The vital point is the central point, 1 in *Dia. 17*. If White plays there, Black is dead, but if Black plays there, he makes three eyes.

If White is called upon to prove that he can kill Black, he plays 1 and 3 in *Dia. 18*. If Black takes at 'a', he is reduced to a three-point eye space and White plays on the point where his marked stone was. It should be clear that Black is dead.



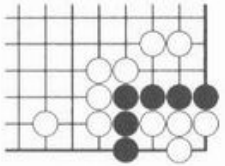
Dia. 18



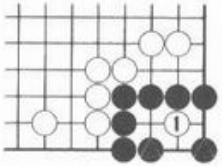
Dia. 19

The black groups in *Dias. 19* and *20* are dead. In *Dia. 19*, no further play is necessary, but if White is called on to prove Black is dead, he would play 'a' and 'b', ataring the black group. Then, when Black takes four stones, the position is similar to *Dia. 16* with White to move.

No further play is necessary in *Dia. 20* either. However, to convince you that Black is dead, suppose that Black played the marked stones in *Dia. 21* and captured four white stones. White would then play back in with 1.

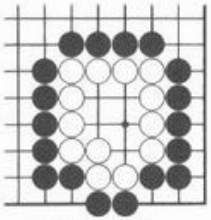


Dia. 20

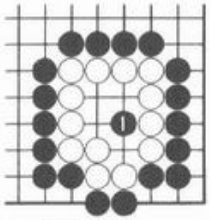


Dia. 21

In *Dia. 22*, White has a five-point eye space. Black 1 in *Dia. 23* is the vital point and White dies.

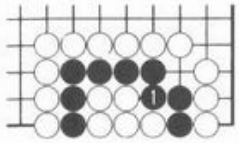


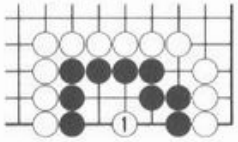
Dia. 22

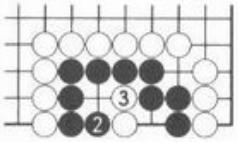


Dia. 23

The black group in *Dia. 24* is dead as it stands. Even if Black captures the five white stones by playing at 1, he ends up with a five-point eye space. White then kills him by playing on the vital point of 1 in *Dia. 25*. If Black plays 2 in *Dia. 26*, aiming to get two real eyes by playing at 3, White takes this point himself. From here it should be easy to see that the black group is dead.

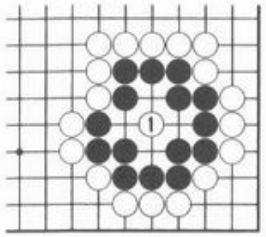

Dia. 24

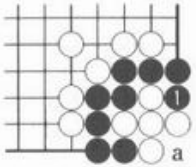

Dia. 25

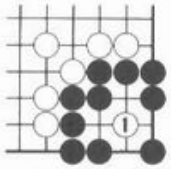

Dia. 26

The black group in *Dia. 27* has another kind of five-point eye space. If it is White's turn to play, he can kill it by playing right in the middle of this eye at 1. (Black could live, of course, if he were able to play at 1 before White.)

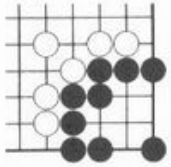
In *Dia. 28*, the black group is dead, even if Black plays 1 and captures the five white stones by playing at 'a'. The result of this capture is shown in *Dia. 29*. White plays on the vital point of 1 and Black is dead.

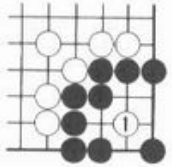

Dia. 27

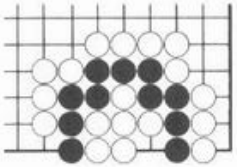

Dia. 28


Dia. 29

Finally, the black eye in *Dia. 30* is a six-point eye space. This is the largest big eye that can be reduced to only one eye. White 1 in *Dia. 31* is the vital point.


Dia. 30


Dia. 31

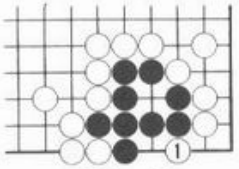

Dia. 32

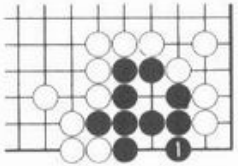
The black group in *Dia. 32* has been reduced to a six-point eye space and no further play by White is necessary. The black group is dead as it stands. You should verify this for yourself.

Hane

Hane is a Japanese term that defies translation. The best we can do is to show you an example and ask you to learn this term as part of your go vocabulary along with the words 'atari' and 'ko'.

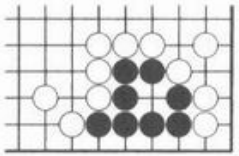
White 1 in *Dia. 33* is an example of a hane move. This move destroys Black's eye at the edge of the board, leaving Black with only one eye. If Black had the chance he would make two real eyes by playing at 1 in *Dia. 34*. White 1 in *Dia. 33* deprives Black of the chance to make this move.

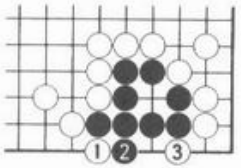

Dia. 33

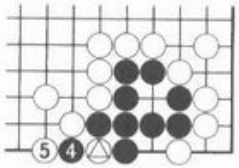

Dia. 34

The hane is an effective move for killing groups. In fact, there is a go proverb which states: 'There's death in the hane.'

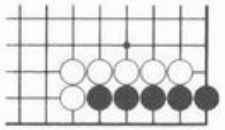
The black group in *Dia. 35* can also be killed with a hane. In fact, two hane moves in succession are needed. White first plays a hane with 1 in *Dia. 36* and, if Black answers with 2, plays another hane at 3. Capturing with Black 4 in *Dia. 37* doesn't help Black live. White ataris with 5 and the point where the marked stone was is only a false eye.

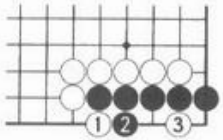

Dia. 35

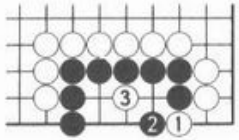

Dia. 36


Dia. 37

Hane moves are often used in combination with placement moves to kill groups. For example, White can kill the black group in *Dia. 38* using such a combination.


Dia. 38


Dia. 39


Dia. 40

White first hanes with 1 in *Dia. 39*. If Black answers with 2, he is reduced to a three-point eye space. Black then makes a placement with 3, killing the black group.

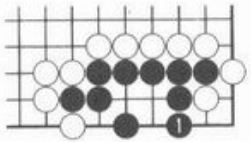
White 1 in *Dia. 40* is another example of this technique. This hane reduces the black group to a five-point eye space into which White places a stone at the vital point of 3.

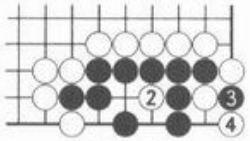
Other Life-and-Death Techniques

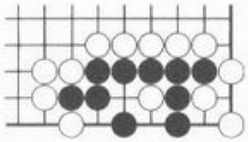
There are many other life-and-death techniques, but these would best be studied in an elementary book such as *Get Strong at Life and Death* or *Life and Death* (see pages 129 and 131). However, the techniques illustrated above occur the most frequently and, for

the time being, should suffice. You will find that a large number of situations that occur in games involving one or a combination of the three techniques shown above. However, we will present one example of an interesting combination by which one can make two eyes for an endangered group.

The black group in *Dia. 41* can live if Black descends to 1. However, it may seem that Black only has a three-point eye space and White can reduce Black to one eye by making a placement at 2 in *Dia. 42*.

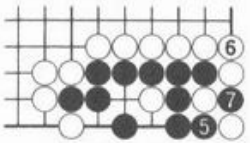

Dia. 41

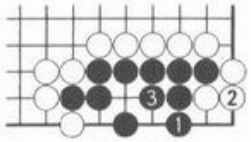

Dia. 42


Dia. 43

But Black can sacrifice a stone by throwing in at 3. If White captures at 4, the result is shown in *Dia. 43*.

Black next ataris with 5 in *Dia. 44* and White must meekly connect at 6, after which Black makes two real eyes in the corner by capturing two stones with 7. If White defends his stones in the corner by connecting at 2 in *Dia. 45* (instead of 2 in *Dia. 42*), Black makes two real eyes for his group with 3.


Dia. 44


Dia. 45

Rankings and Handicaps

The amateur ranking system used by go players works as follows. Beginning players are assigned the rank of 35-kyu (pronounced 'kyew') and as they learn more of the basic techniques of the game, they rapidly advance up the kyu ladder until they reach about 20- to 15-kyu. This rapid advance assumes, of course, that they study and play a few times a week for about two months. From 10-kyu up to 1-kyu, progress is usually much slower. Once an amateur becomes an expert player, he receives the rank of 1-dan ('shodan' in Japanese and pronounced 'showdahn') either from the go organization he belongs to, or simply by measuring his playing strength against other dan-ranked amateurs. This can be done by using the handicap system, which will be explained in detail below. Amateur dan rankings go as high as 7-dan. Professional rankings run from 1-dan to 9-dan, but they are on a different scale, so do not correspond in strength to amateur ranks. A professional 1-dan should be able to give an amateur 1-dan about seven handicap stones and still have at least a fifty-fifty chance of winning. The handicap system in go gives weaker players a realistic chance of winning when playing stronger opponents, assuming the handicap is sufficient.

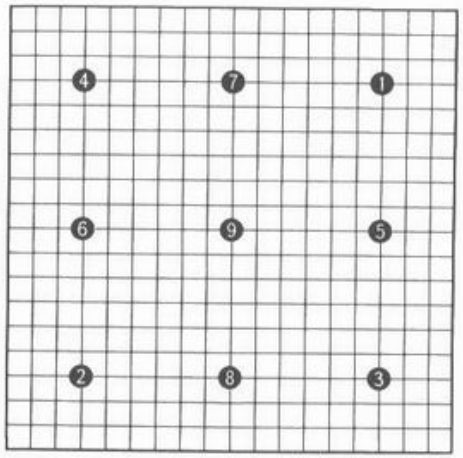
Players of equal strength usually use a method called 'nigiri' to determine which player takes the white stones and which takes the black. When using nigiri, one player takes a handful of white stones while the other takes either one or two black stones, or simply says 'odd' or 'even'. Both sets of stones are placed on the go board. If the number of black stones and white stones are both even or both odd, then the player who placed the black stones on the board plays with the black stones. If there is an even number of black stones and an odd number of white stones, or vice-versa, then the player who placed the white stones on the board plays with black. From that point on, the players can alternate playing with the black and white stones.

When players of different ranks have a game, the stronger player always takes the white stones, and the handicap is determined by the difference in ranks between them. For example, if one player is 1-kyu and the other 2-kyu, then the 2-kyu player does not receive any handicap stones, but instead always takes the black stones and makes the first move.

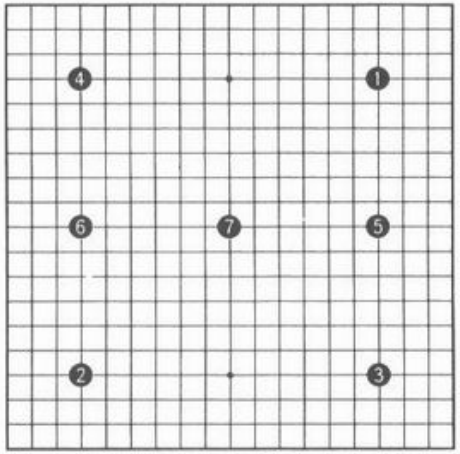
When a 1-kyu plays against a 3-kyu, the 3-kyu receives a two-stone handicap; when the 1-kyu player plays against a 5-kyu, the 5-kyu receives a four-stone handicap, etc., up to a nine-stone handicap, which is usually the largest handicap given.

The same handicap system is used for dan-ranked players as well. In principle, it is possible to determine your own go strength by playing players of established rank. However, until a go player becomes about 1-dan, his playing strength can fluctuate widely. Finally, while the ranking system for go is the same virtually the world over, the values of ranks may vary from place to place.

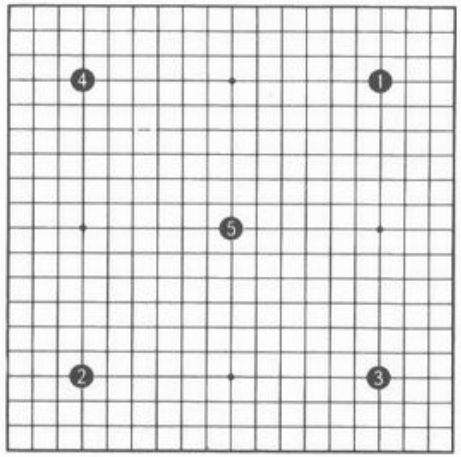
Once the handicap for the weaker player has been established, he places the handicap stones on the board in the order shown in the three diagrams below. Then White makes the first real move of the game, after which the players alternate placing stones on the board.



Placement for an eight- or nine-stone handicap



Placement for a six- or seven-stone handicap



Placement for a two- to five-stone handicap

Chapter Nine

Handicap Go

After you have learned the rules and have played a number of games on smaller boards, the easiest way to make the transition to the standard 19x19-size board is to play handicap games with stronger players. Handicap games are the best way to learn the strategy and tactics of the game on the full-size board. An empty board with 361 points to play on can be quite bewildering, but with a nine-stone handicap your stones are all over the board and it is easy to see how to make territory. As you work your way down the handicap ladder, from nine stones to two stones, and then play black without a handicap, you will have oriented yourself to the large go board as well as gained valuable strategic and tactical knowledge.

With this in mind, we give the following example of a 9-stone handicap game played between two amateurs. Although both sides make many mistakes, this game is instructive because you can see how Black uses his nine stones to quickly form secure territory. When playing through this game don't worry about the reason for each move; rather, concentrate on the overall flow of the game and the way Black stakes out and secures his territory.

Figure 1. White 1 and 3 are known as the small knight's approach move against the star-point stone. There are many ways to answer this approach move, but making a small knight's extension from the star-point stone with 2 and 4 is a strong and steady way to play. With these moves, Black is starting to stake out the territory in the upper right and left corners.

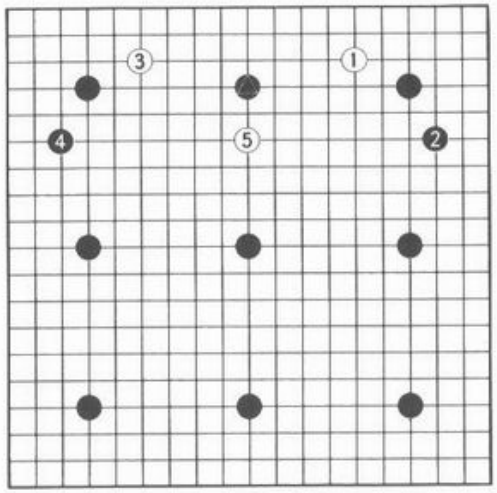


Figure 1 (1–5)

When White caps the marked black stone with 5, he seems to be laying claim to the area at the top of the board. Because White's position is so thin, it is unreasonable for him to expect to be able to capture this stone, let alone take the area at the top. But in face of the large advantage Black's nine stones give him, White cannot play passively and must do something dramatic, hoping that Black's inexperience will cause him to go astray in the chaotic fighting that could result if Black tries to rescue his marked stone.

When you play your first games with a nine-stone handicap, we suggest that you avoid complications and place emphasis on building solid, safe territories. This will enable you to win many of your first handicap games and later, as you gain technique and confidence, you can adopt a more aggressive style of play.

Figure 2. Black ignores White 5 and secures the territory in the upper right corner with the sequence to 10. His strategy is to let White take the territory at the top, while he builds secure and impregnable territories in the corners.

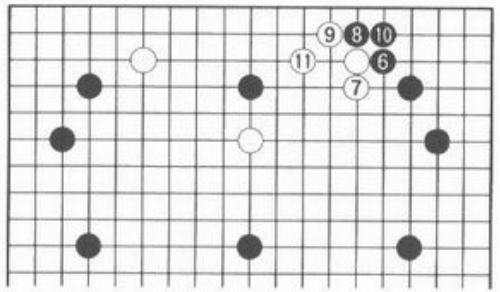
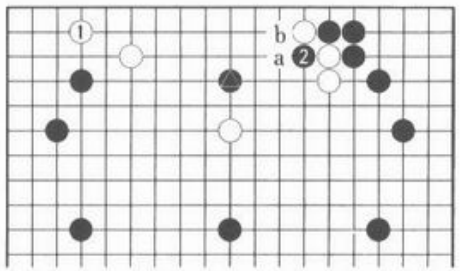


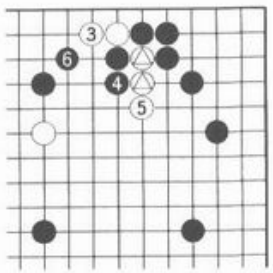
Figure 2 (6–11)

After Black 10, White must defend at 11. Why do we say 'must'?

Suppose White were to play 1 in *Dia. 1.* Black would then cut at 2, separating the three white stones at the top right into two groups. White can't capture the stone at 2 in a ladder starting with 'a' because the marked stone blocks the ladder (play this ladder out on a board and see what happens). However, Black can capture the white stone on the second line by playing 'b' with his next move. If White prevents this by extending to 3 in *Dia. 2*, Black plays 4, threatening to capture the two marked stones by playing at 5, so White defends, playing at 5 himself. Finally, Black plays 6, catching the two white stones at the top in a net. (Confirm for yourself that these two stones can't escape.)



Dia. 1



Dia. 2

Figure 3. Next, Black secures the left corner with the sequence to 16. Again, if White wants to keep his position at the top intact, he must defend with 17.

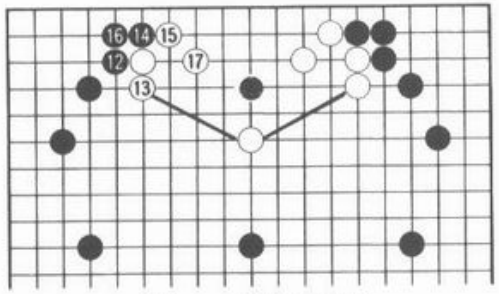


Figure 3 (12–17)

Evaluating the result so far, Black's two corners in the upper left and the upper right are worth at least 35 points in secure territory. White dominates the top center of the board, but his position is thin and there are many ways for the marked black stone to escape. Even if we were to grant that White will eventually get the territory marked off by the lines at the top, it would only come to about 25 points. Furthermore, it is still Black's move, which he can use to his advantage elsewhere on the board.

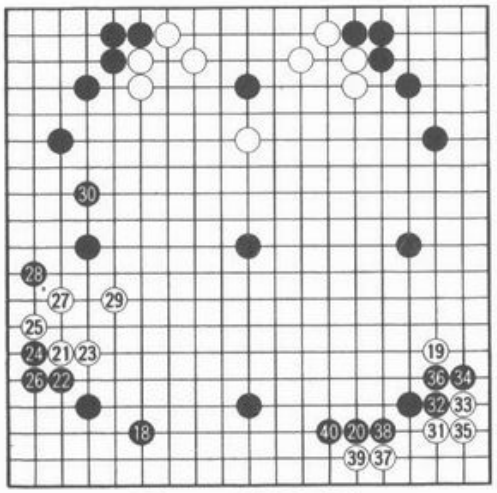


Figure 4 (18–40)

Figure 4. Black stakes out more territory at the bottom with 18 and 20. Then, when White makes an approach move at 21, Black seals off the lower left corner with the now familiar sequence to 26. Again White must defend at 27.

Black 28 is a strong attacking move. It robs White of a base on the left side and forces him to run out into the center with 29 in order to ensure that his stones will be able to get the two eyes necessary for life. Next, Black plays 30, a big move which secures the territory along the upper left side.

Let's evaluate the position again. Black now has about 30 points along the upper left side, about 17 points in the upper right corner, and 17 points in the lower left corner, for a total of about 64 points. Although White has established a position on the lower left side, the increase in the amount of his territory is negligible.

It is a good habit to evaluate the amount of territory held by each side after the close of every tactical encounter. In this way you can determine whether you are falling behind or gaining in the struggle for territory.

Next, White invades the lower left corner at the 3–3 point with 31. This is a common white tactic in handicap games. White can form a living group and take the territory in the corner with the sequence to 39, but Black makes a wall on the outside up to 40. This wall is worth more than the small amount of territory that White gains in the corner (about 6 points). White's stones are confined to the corner and have little influence on what happens on the rest of the board. Black's wall, on the other hand, works well with his three marked stones to form a framework of potential territory in the lower right quadrant of the board.

Figure 5. If Black were able to secure the lower right quadrant as his territory, his lead would be unassailable, so White must try to form a living group in this part of the board. He does this by playing 41 and then running away into the center with the moves to 47. Black blocks White's advance into the upper right side with 42 and keeps him confined to the lower right with 44 and 46. Next, Black plays 48, expanding his territory on the upper right side and threatening to destroy White's territory at the top by leading out his marked stone. White defends with 49.

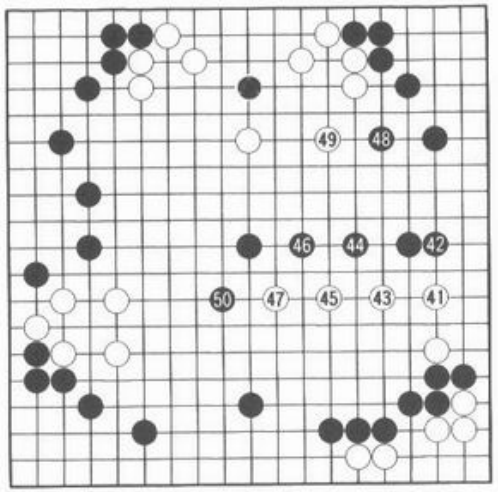


Figure 5 (41–50)

Let's count the score again. Conservatively, Black has 30 points on the upper right side, 17 points in the bottom left corner, and 27 points on the upper left side, for a total of 74 points. Optimistically, White has about 27 points at the top, two points on the lower left side and six points in the lower right corner, for a total of 35 points.

Black 50 is a powerful move because it separates the white group on the right from the one on the left. Therefore, both these groups have to form two eyes on their own. In the next figure you will see that while White is busy making life for these two groups, Black will be solidifying the territory he has already laid out.

Figure 6. White's stones in the lower right have to live. The moves to 57 just barely secure the space to make two eyes. Note Black 52. This move blocks White's access to the bottom and forces him to defend at 53. If White doesn't defend, he loses his stones in the corner, as *Dia. 3* shows. If White 6 at 7, Black plays 7 at 6, keeping White's group limited to one big eye.

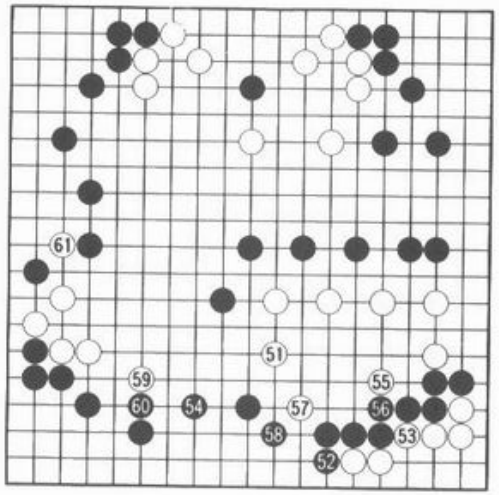
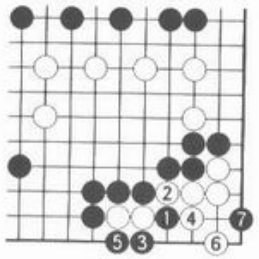


Figure 6 (51–61)



Dia. 3

While White was busy making the space for two eyes for his group on the right, Black was able to secure the territory at the bottom for himself with 52, 54, and 58. Black now has 35 points of territory at the bottom, giving him a total of about 95 points of territory throughout the whole board. White has, at best, only 40 points.

Next, White turns his attention to his group on the lower left. He first plays 59 and then 61. White intends to use 61 as a sacrifice stone in order to give the main body of his stones on the left shape for two eyes.

Black cuts off the white stone with 62, but then White forces Black to capture it with 64 and 66. This maneuver has enabled White to pull his stones out into the center with the sequence to 67. White's stones on the left can now either make two eyes or link up to his stones at the top. In any case, all his groups are relatively safe and most likely cannot be captured. In the meantime, Black has completely secured the left side, so it is now impossible for White to invade this territory.

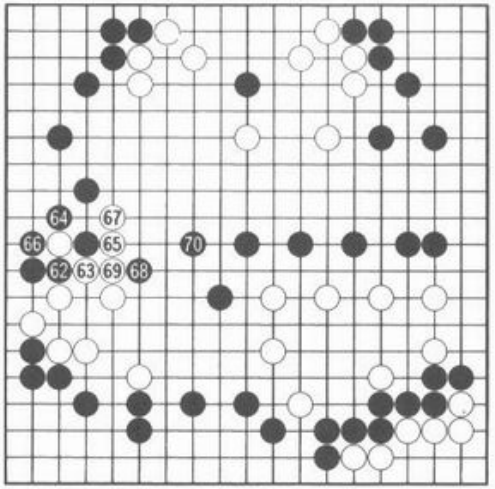


Figure 7 (62–70)

Black peeps at 68, threatening to cut off the white stones at 65 and 67 by playing at 69, so White must defend by playing 69 himself. Finally, Black plays 70, a solid move which restricts White's options in the center.

Figure 8. White peeps at 71, forcing Black to defend with 72. If Black ignores this move, White will push through with 1 in *Dia. 4.* If Black blocks with 2, White can atari with 3 and, when Black connects with 4, atari again with 5 and 7. If White plays 9, the three black stones cannot escape. However, White might play 9 at 'a' and try to capture the four black stones in the center of the board.

Next, White makes a series of forcing moves from 73 to 85, with the aim of expanding his territory at the top.

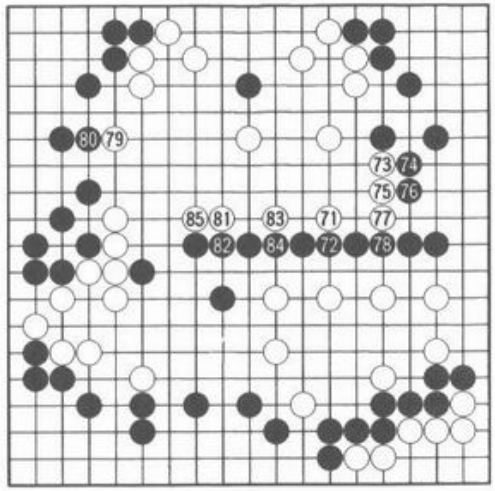
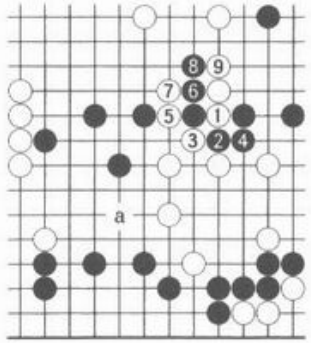


Figure 8 (71–85)



Dia. 4

At this point the endgame begins. Both Black and White have laid out their territories. White's territory consists mainly of the area at the top of the board, which is worth a maximum of 50 points, about 6 points in the lower right corner, at most 10 points in the lower right quadrant, and about 4 points on the lower left side, for a grand total of about 70 points. Black, on the other hand, has almost 90 points staked out at the bottom and on the upper right and left sides. Black's territory is well-guarded, but White's is a little thin, so Black will try to reduce the size of White's territory, while expanding his own at the same time.

Figure 9. Black sets about reducing the territory mapped out by White at the top with the moves to 94. He then pushes against the white group in the lower right with the sequence from 96 to 100, catching the marked stone in the process. Since the white group still does not have two eyes, White expands its space with 101.

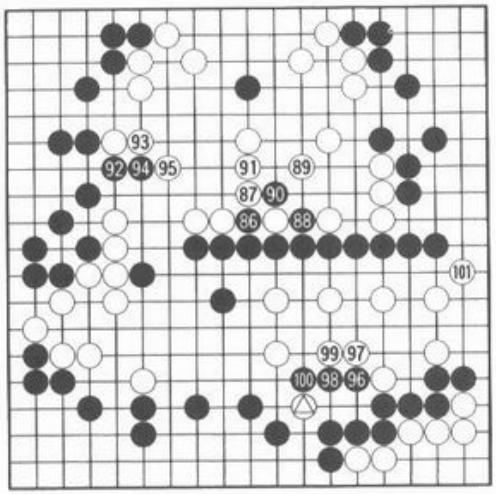


Figure 9 (86–101)

Figure 10. White 1 (White 101 in *Figure 9*) threatens to invade Black's territory on the upper right, so Black defends with 2. The moves to Black 6 are a common endgame sequence, which reduces Black's territory upper right by two points. White 7 and 9 are also endgame moves which reduce Black's territory and expand White's, but White comes back to the lower right and plays 11 to ensure that his group there has the necessary two eyes for life.

After Black 12 and 14, White must make the last defensive move with 15 to ensure that his group on the lower right side will get two eyes. Black 16 threatens the white stones in the corner, so White defends with 17.

After White 25, all of White's groups are safe from capture, but Black can still torment White by sacrificing a stone at 26 and playing the moves 28 and 30, forcing White to defend with 31.

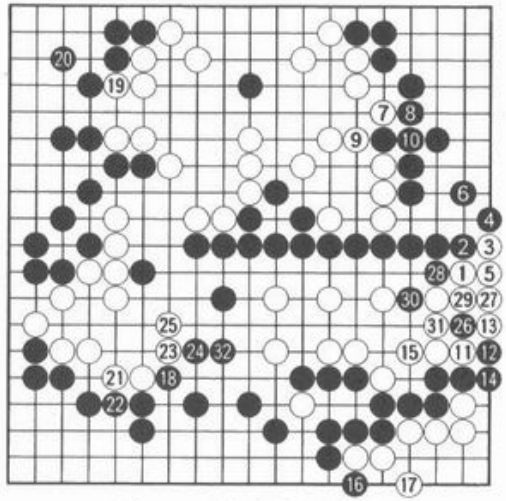


Figure 10 (101–132)

Figure 11. The game is approaching the end. After White 45, Black 46 is one last move aimed at tormenting the white group on the right side. White can make two eyes after 53, but only by setting up a double ko.

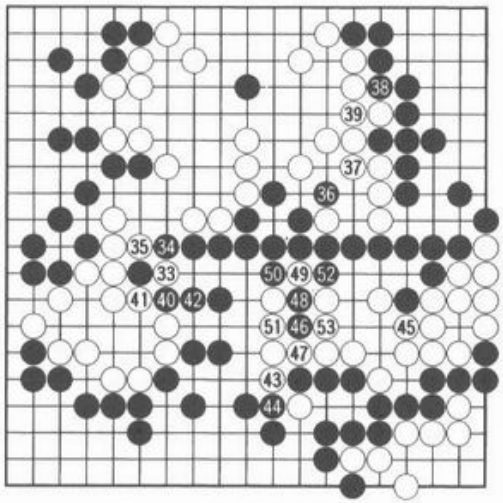


Figure 11 (133–153)

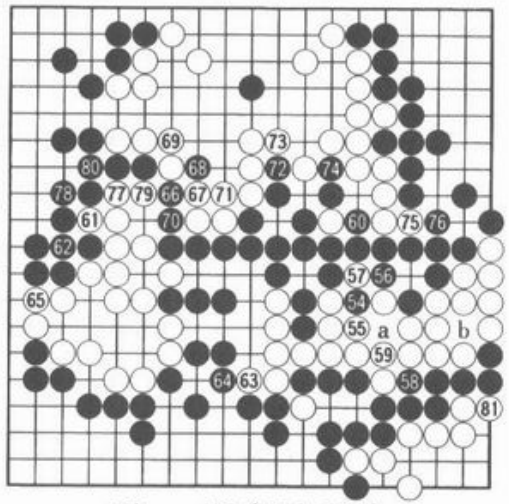
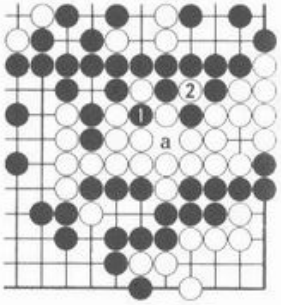


Figure 12 (154–181)



Dia. 5

With the sequence Black 58, White lives because he gets a double ko. After White 59, the point 'a' is an eye (White has his second eye at 'b') because even if Black recaptures with 1 in *Dia. 5*, White can take the ko to the right by playing 2. Black can't win both of these kos, so the eye at 'a' can never be destroyed.

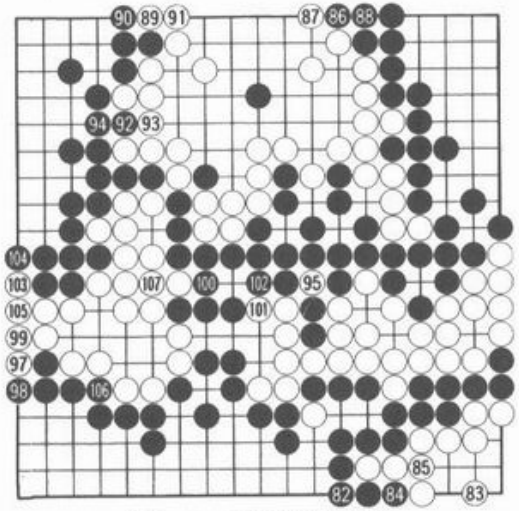


Figure 13 (182-207)
Black 96 retakes White 95 by playing on ●.

Figure 13. These are the final moves. All that remains is to play on the neutral points, shown in *Figure 14* below.

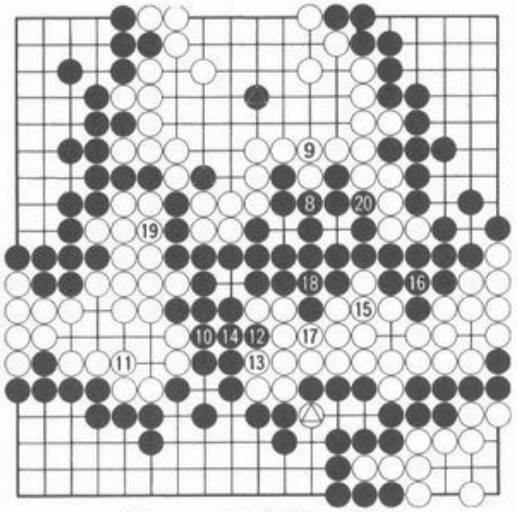


Figure 14 (208–220)

Figure 15. In preparation for counting the score, White removes the two marked black stones at the top center and places them in Black's territory. Black removes the one marked white stone at the bottom in *Figure 14* and places it in White's territory in *Figure 15*.

Finally, the prisoners captured during the game are placed in the opposing side's territories. Each side has captured five stones. These are shown as the circled stones. From here you can count the territory held by each side.

The result — Black 92 points; White 40 points. Black wins by 52 points.

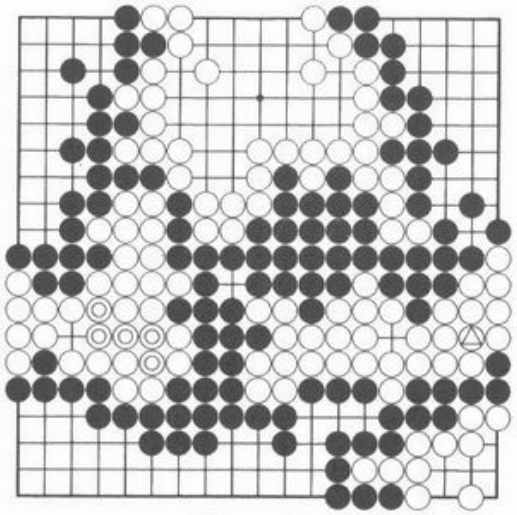


Figure 15

Go and Intelligence

It is only recently that the educational value of games and their role in developing intelligence in children have come to be appreciated. A number of studies in the West have shown that playing chess aids not only the early development of the brain, but also gives social and character benefits to its young players, as well as contributing to overall classroom performance. However, all the research done on this subject in the West has neglected go, the one game that has the most pronounced effect on the intelligence of its players.

Why is go an effective supplement to a young person's education?

A number of Japanese psychologists have done extensive testing of young children who play go. Their research has led them to believe that studying go is the best way to develop a child's innate abilities. According to one of these researchers, the strategy of go is global in scope, so action that takes place in one part of the board has an effect on every other part of the board. In contrast, a child's view of the world is narrow, but when taught to play go, the child quickly starts to develop a broader vision of the world with respect to himself.

The younger the child learns to play, the better the results. Four or five years seems to be the best age to learn. At this age a child's brain is only about 65% to 70% developed, so the benefits of go to his thinking processes are optimal. Moreover, the child enjoys playing go because it is fun.

One of the most important things go gives children is the ability to concentrate. They concentrate on the game because they enjoy playing it. Furthermore, by concentrating so hard, analyzing the numerous variations and their outcomes, they are performing prodigious feats of memory and flexing their mental muscles to the maximum. In the process, they have to visualize in their minds

what a hypothetical sequence will eventually look like on the board, keep track of the many variations they are analyzing, and, finally, come to a decision on their moves based on all this analysis. Other endeavors in which children use their minds so intensively while enjoying themselves so thoroughly would be hard to find. Certainly, the ability to concentrate is something that does not necessarily come naturally. People learn how to concentrate by doing things that interest them. But there are different kinds of concentration: passive and active concentration. A child may concentrate on his favorite TV programs, but this is a passive kind of concentration. When you play a game like go, however, you have to use your mind to the full. If you watch a child while he is engrossed in a game of go, you find that his eyes are glued to the go board and nothing distracts him. In the end, this ability to concentrate on a game like go can be easily transferred to other fields of study.

This could be the reason why so many students who are able to enter prestigious schools like Tokyo University (the Harvard of Japan) are strong go players. On the surface, one might think that the amount of preparation required to pass the highly competitive entrance examinations to such schools would preclude 'wasting' time by playing go. On the contrary, having studied go may have given these students a competitive edge.

One of the unique aspects of go is the necessity of using both your intuitive and analytic faculties when playing. In the early stages of the game, there are so many possible ways to play that no one can say for sure that one of a number of plausible moves is any better than another. There are of course strategic principles that can guide you, but even the strongest players must ultimately rely on intuition. As the game progresses, however, analytical ability becomes more and more important until, in the final stages of the game, it is the overriding factor. Analytically, chess may be on par with go, but with respect to developing one's creative powers, chess appears to lack an entire dimension.

Some knowledge about the brain is necessary to explain this. The human brain is divided into two hemispheres: the right and the left. In general, the left side of the brain is dominant in right-handed people. Logical and linguistic abilities are also controlled in this part of the brain. In left-handed people, the right side is dominant. The more intuitive abilities, such as aptitudes for music and for the recognition of complex visual patterns, are controlled in this part of the brain.

When people have a stroke, one side of the brain is damaged. If a go player has a stroke and the damage is on the right side of the brain, the opening part of his game becomes very weak, but his middle game and endgame remain strong. If the damage occurs on the left side, his opening strategy remains strong, but his middle game and endgame become weak.

In general, recovery from strokes is very slow. However, left-handed people tend to recover their speech relatively quickly. Surprisingly, go players who are stricken by strokes and who have studied go intensively since they were 4 or 5 years old have the same recovery rate as left-handed people, even though they may be right-handed.

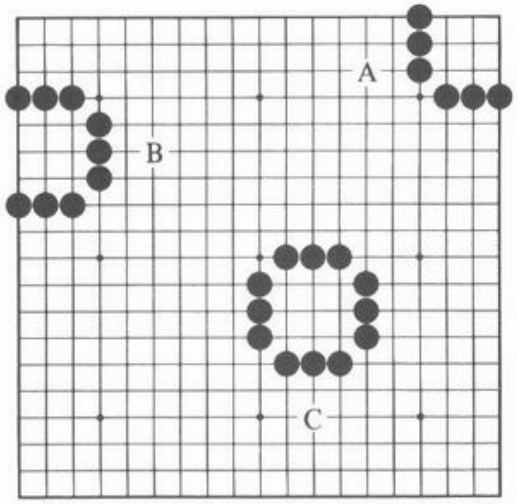
Using only one side of your brain is inefficient. However, playing go uses both sides of the brain, enabling you to develop both your creative and logical abilities.

Chapter Ten

Opening Strategy

Go is primarily a strategic game and tactics must be integrated into and made subservient to your overall strategy. For this reason, it is important to pay close attention to the opening moves, which lay the foundation of your strategy. If your opening is sound, your tactical problems in the middle game will become simpler.

As we pointed out in the first chapter, it is good strategy to play your initial moves near the corner star-points. The reason is that taking territory is easiest in the corner.

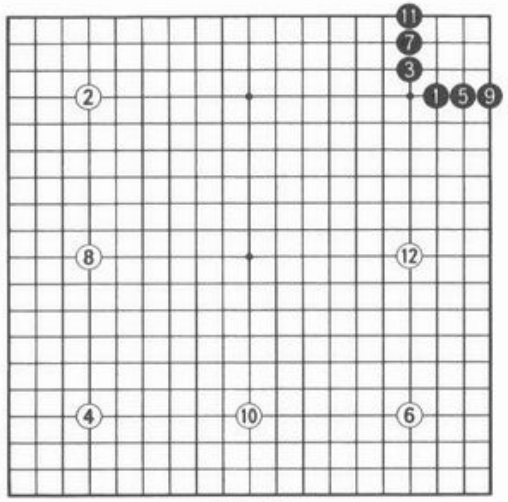


Dia. 1

Look at *Dia. 1*. In the corner (Position A), it takes 6 stones to surround 9 points of territory. At the edge of the board (Position B) it takes 9 stones to take 9 points of territory. But in the center of the board (Position C) it takes 12 stones to control 9 points.

From this we can conclude that when taking territory, stones work most efficiently near the corners, and least efficiently in the

center of the board. This is the way the game proceeds: stones are first played near the corners, then along the sides, and finally in the center.



Dia. 2

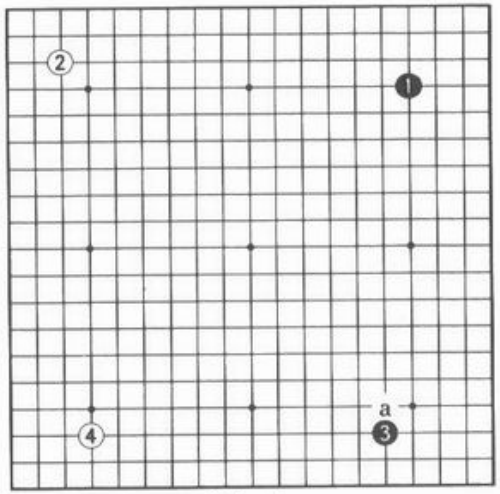
You should not, however, concentrate all your moves in one part of the board. Black's moves in *Dia. 2* are an example of bad play, while White's moves are examples of good strategy. Black is 'putting all his eggs into one basket', but White is establishing footholds throughout the board.

In *Dia. 3* Black has placed stones in two of the four corners, White in the other two. Note that each side is occupying a different position with respect to the star-point. These four points, as well as the point 'a', are the points that one usually occupies in the corner.

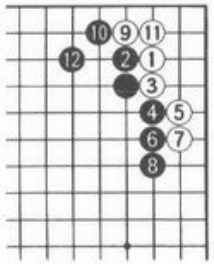
Each of these points has a different meaning and you can often determine your opponent's strategy from his initial moves. Let's look at the aim of each of these moves.

Black 1 in *Dia. 3* is on the 4–4 point. This move is influence-oriented and does not aim to take immediate profit. For example, a player who occupies two star-points with his first two moves

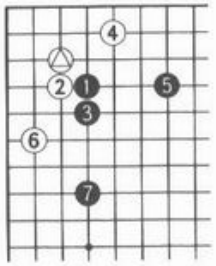
probably intends to play a strategic game on a grand scale; he will be willing to give the other side some profit in exchange for influence.



Dia. 3



Dia. 4



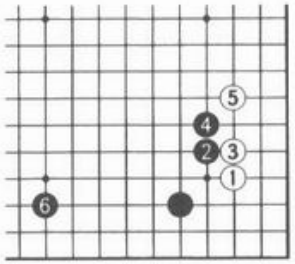
Dia. 5

For example, White can invade under the marked stone at the 3–3 point with 1 in *Dia. 4* and take the territory in the corner with the sequence to White 11. Black ends the sequence by making a diagonal connection at 12. This result is very good for Black. His stones radiate influence throughout the whole board, but White's stones are confined to the corner, lacking any strategic significance. White 2 in *Dia. 3* is on the 3–3 point. A player who makes this move will probably put emphasis on taking territory. *Dia. 5* shows a

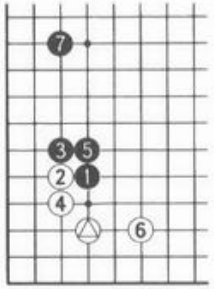
typical pattern that results from this move. Black strikes at the shoulder of the marked stone. In the sequence to Black 7, White gets sure profit in the corner, while Black gets outside influence.

Black 3 in *Dia. 3* is on the 5–3 point. This move emphasizes the side rather than the corner territory. White 1 in *Dia. 6* is the usual move played against the marked stone. In the sequence to 6, White takes profit on the right, and Black establishes a position along the bottom.

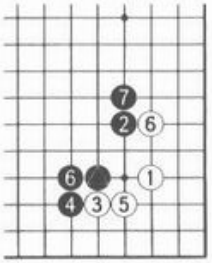
White 4 in *Dia. 3* is on the 3–4 point. This move emphasizes the corner territory and exerts influence toward the right. However, it is weak toward the left side. *Dia. 7* shows a typical sequence. White gets profit in the corner, while Black gets some territory along the left side.



Dia. 6



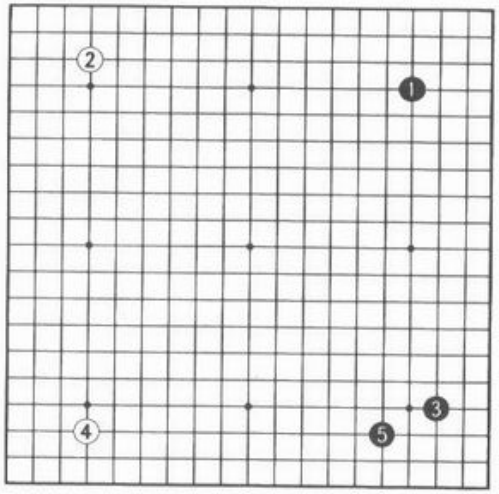
Dia. 7



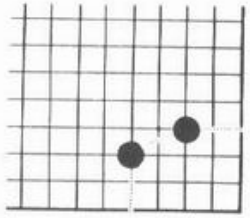
Dia. 8

Finally, the marked black stone on the 5–4 point in *Dia. 8* emphasizes the center. White gets the corner by playing 1, but Black confines White to the corner and side, getting influence throughout the board with the sequence to 7.

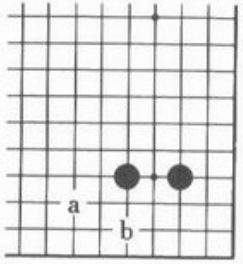
The sequences in *Dias. 4* to *8* are examples of basic corner opening patterns, called josekis. You might want to memorize these patterns for future reference, but don't worry about the meaning of the individual moves for now. The thing to notice is that one side usually gets profit while the other side gets influence. Depending on the position, influence can be more valuable than immediate profit, or vice versa; it depends on the potential of the influence being turned into territory later on.



Dia. 9



Dia. 10

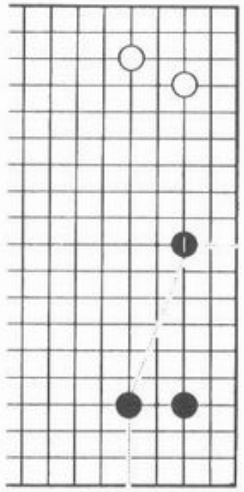


Dia. 11

Corner Enclosures

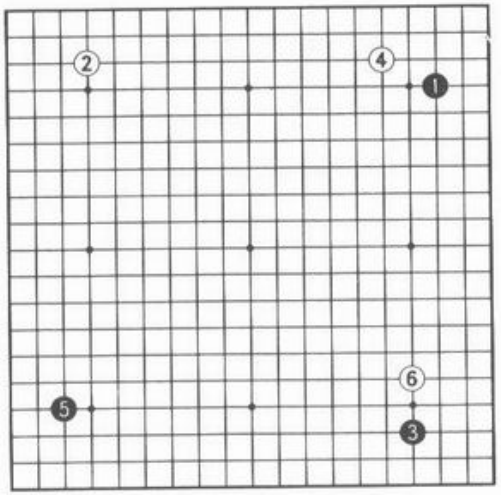
Each side occupies two corners up to White 4 in *Dia. 9*, after which Black plays at 5, reinforcing his stone at 3. This kind of move is called a 'corner enclosure'. Making a corner enclosure is good strategy for two reasons: it takes more than 12 points of profit, indicated by the broken line in *Dia. 10* (however, this profit is not certain), and it provides a base from which to launch attacks.

The two black stones in *Dia. 11* form another kind of corner enclosure. It is not as solid as the enclosure in *Dia. 10*, since White can attack it at 'a' and 'b'. However, it exerts strong influence along the side. When you have such an enclosure, it is desirable to extend from it with a move like 1 in *Dia. 12*. The area to the right of the broken line is now under the influence of Black.



Dia. 12

Once you have made a corner enclosure, extending from it in the direction perpendicular to these stones is usually an important strategic move. This is especially true if your opponent has a corner enclosure in an adjacent corner as in *Dia. 12*. It should be clear that whichever side occupies the point 1 will have the strategic advantage on the right side of the board.



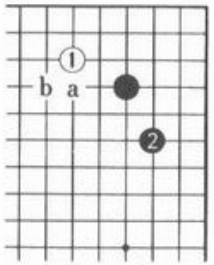
Dia. 13

Approach Moves

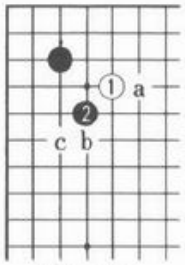
In *Dia. 13*, Black occupies the 3–4 point in three corners, while White follows him around the board with 4 and 6. These two moves are examples of approach moves against the black stones on the 3–4 points. The value of an approach move is that it prevents the opponent from making a corner enclosure, thereby keeping the game fluid.

Against a stone on the star-point, White 1 in *Dia. 14* is the most common approach move, although moves at 'a' and 'b' are also played. Black 2 is a solid response.

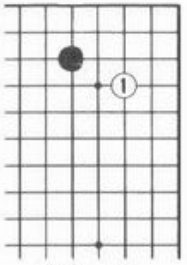
We already saw one approach move against a 3–3 point stone in *Dia. 5*. White 1 or 'a' in *Dia. 15* is another example. Black 2, 'b', and 'c' are possible responses.



Dia. 14



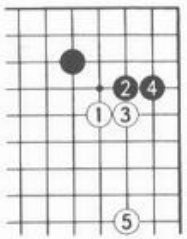
Dia. 15



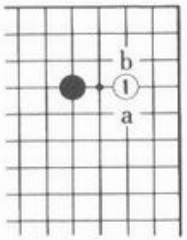
Dia. 16

The usual approach move against a 5–3 point stone is White 1 in *Dia. 16*. We already saw one possible development from this move in *Dia. 6*. However, White could approach this stone at 1 in *Dia. 17*. In this case, Black would seal off the territory in the corner with 2 and 4, and let White take up a position along the right side with 3 and 5.

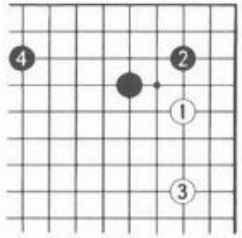
Finally, there are the approach moves against a 5–4 point stone. White 1 in *Dia. 18* is the most common, and we saw one possible joseki pattern that arose from this move in *Dia. 8*. However, in certain situations, White 'a' or 'b' might also be a feasible approach move. For example, if White wanted to establish a position along the side, he might approach with 1 in *Dia. 19*. The joseki to Black 4 would probably follow. However, if White wanted to sneak out at the top, he might invade at the 3–3 point with 1 in *Dia. 20* and play the joseki to 9.



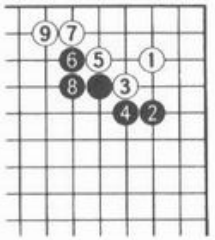
Dia. 17



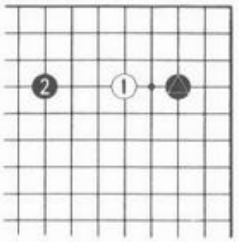
Dia. 18



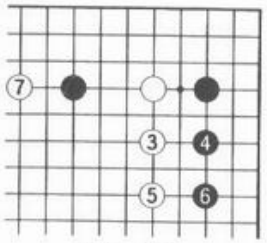
Dia. 19



Dia. 20



Dia. 21



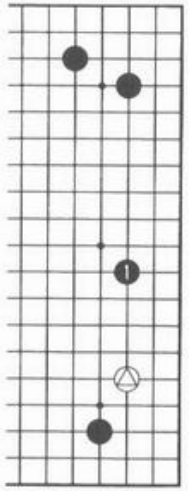
Dia. 22

Pincers

Pincers are important moves in the opening. With these moves the struggle for territory begins. Black 2 in *Dia. 21* is an example of a pincer. This move squeezes the stone at 1 against the marked stone in the corner. Since White is unable to extend along the top he has to escape into the center with 3 in *Dia. 22*. But this helps Black to secure territory along the right side with 4 and 6.

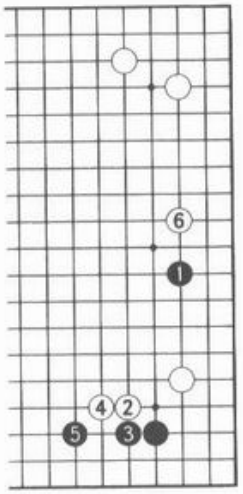
However, White can come back and play a pincer of his own with 7 against the marked black stone, using the strength of his stones on the right.

Black 1 in *Dia. 23* is also a pincer. This is an especially good move because it not only acts as a pincer but also as an extension from the corner enclosure at the top right.



Dia. 23

However, if it were White who had a corner enclosure at the top right, Black 1 in *Dia. 24* would be a dubious move. White would be able to press with 2 and 4, then play a pincer of his own with 6 against Black's stone at 1. This move works perfectly with White's corner enclosure at the top and his three stones at the bottom.



Dia. 24

Go and Computers

The year 1997 was a bad year for human chess and Othello champions. The world chess champion, Gary Kasparov has fallen to Deep Blue, an IBM computer designed specifically to play chess. The world Othello champion also fell to a computer. There are even backgammon and poker programs against which it would not be wise to risk betting money. But go still remains far beyond the reach of computers.

On the surface, go might seem to be an easy game for a computers to play well. Its rules are few and simple. Unlike chess, with its different kinds of pieces and complicated rules, go is played only with black and white stones, all of equal value, which would seem to make it compatible with the binary nature of computers.

Since the object of go is to control more territory than your opponent, the best move in any position is simply the one which gives the player of that move the maximum amount of territory: a simple counting procedure, a chore computers excel at. But it is not so easy.

Certainly, fewer than a hundred lines of computer code are needed to program a computer to play a legal game of go. Add a few more lines to the program and the computer will be able to evaluate the amount of territory controlled by each side. But when it comes to tactics and strategy, the best programs are only a little stronger than a beginner.

One reason a game like chess can be programmed to such a high level is that it is essentially a tactical game, where material gain is an important factor, at least the way computers presently play it. The best chess programs look ahead 7 or 8 ply — sometimes in special cases as much as 14 ply — to find a move that gives either a material or a positional advantage.

In go, however, material gains are strongly linked to strategic considerations. A tactical success, such as the capture of a large group of stones in one part of the board, might be a game-losing blunder.

Another factor which makes go more difficult to program than chess is the size of the board. On the standard 19x19 grid with 361 playing points, there can be anywhere from a hundred to over three hundred possible moves to consider. Consequently, making exhaustive whole-board searches, as chess programs do, is impractical and, considering that go players routinely look more than 10 moves deep, this would not make for a strong program. In most chess positions there are usually around 30 possible moves, and 95% of human chess players make oversights within a search horizon of three or four moves.

If a computer is to play go well, it will not be able to rely on brute force; it will have to be programmed to play intelligently. In other words, heuristics will have to constitute a very large part of the program. In chess the two main heuristics are material gain and mobility. The problem in go is that there are so many principles which constitute a good move; there is no one dominating factor. The most likely candidate which comes to mind for an evaluation function is 'size of territory'. But to quantify the concept of territory is not so simple.

Superficially, certain kinds of defensive moves may not seem to have a territorial meaning. In fact, they sometimes (in the short term at least) give one's opponent more territory than the attacker initially gets. But it is essential that they be played because they maximize the efficiency of the other stones. Ultimately, such moves, if they are good ones, will translate into territorial gains somewhere on the board.

In some positions, a group of stones may not define territory, but the group radiates influence which, with skillful play, can be turned into territory, often in another part of the board.

In other cases, moves must be made to maintain the integrity of a position. Such moves may seem to duplicate the work of the other stones in a particular locale, but if these moves are omitted, the whole position could collapse.

Of course, there are moves which directly take territory, but it is hard to instruct the computer to recognize when such moves

should be made. Clearly, quantifying a general concept of territory for go, which a computer can understand, is not an easy task.

Checkers is an example of a game that has been successfully programmed using heuristics, but in checkers the heuristics are additive. There are the concepts of material, relative strength of the material, mobility, position of the pieces, etc. Each heuristic contributes to the numerical evaluation of each position in the search tree, and finally the computer simply chooses the move which will lead to the highest-valued position.

It would also be possible to compile heuristics for go, but these heuristics would give contradictory suggestions as to where a move should be played, and they would contribute little to increasing the strength of a go program. Strength in go relies too much on intuition and pattern recognition. These are areas where computers, as yet, have almost no ability.

In conclusion, it will be a long time before computers are able to play go at the same level that has been achieved for chess and checkers. Major breakthroughs will first have to be made in the field of artificial intelligence as well as advances in computer hardware.

Because of go's complexity, it could provide the vehicle to help make some important advances in artificial intelligence. Most applied-AI tasks, such as vehicle maneuvering or mechanical manipulation, take place in the real world. But this is a 'noisy' domain which make problems difficult to solve. Go, on the other hand, provides a clean environment, yet it has many features in common with the targets of applied AI. Although I am skeptical that computers will ever be able to compete on equal terms with even moderately strong amateur go players, the challenge of go can provide the impetus for many of the future advances that will be made in artificial intelligence.

Chapter Eleven
An Example Game

In this final chapter, I am going to present one of my games. It was the fifth game of the 22nd Judan title match, played on April 28, 1988. By winning it I was able to capture this title from my opponent, Kato Masao, who also held the Meijin, Oza and Gosei titles at that time. In this best-of-five match I had won the first two games, but I lost the next two, so the title hinged on this game.

I played with the white stones, so I received 5 1/2 points of territory at the start of the game. That is because it is estimated that the player with the black stones, who makes the first move, has a 5- to 6-point advantage. Adding the half point precludes draw.

This game is played at a very high level, so don't worry about the details; just try to follow the flow of the game. Later, when you become stronger, you can read a detailed commentary of this game, as well as others, in the English-language magazine *Go World*. In particular, focus your attention on the ko fight that takes place in the lower right corner from moves 100 on.

Figure 1. Up to White 4, each side occupies two of the four corners. Black makes an approach move with 5 and White plays a pincer with 6. The sequence to White 14 is a joseki, a standard corner opening. White takes the territory on the lower left side and Black establishes a position at the bottom left.

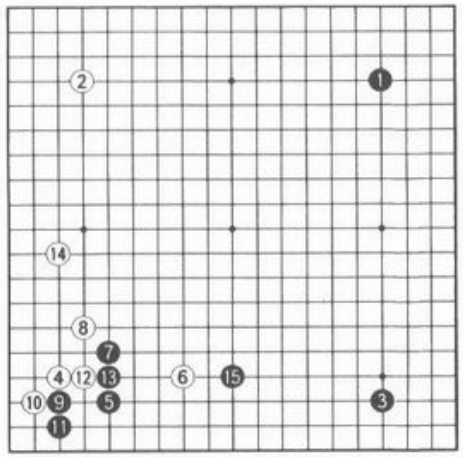


Figure 1 (1–15)

Black plays 15, using the strength he has built up on the left to pincer the white stone at 6. This move can also be viewed as an extension from his stone at 3, so it is a very timely move.

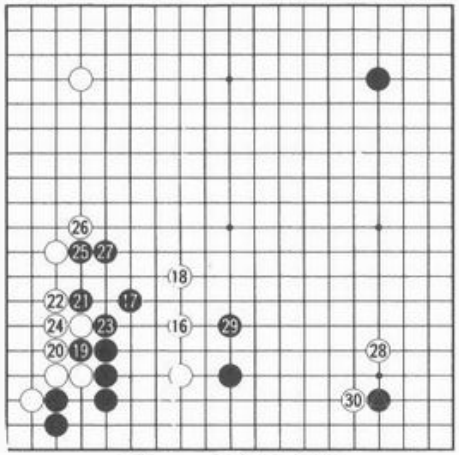


Figure 2 (16–30)

Figure 2. White runs out into the center with 16 and 18. Black must also move out into the center. He does this by playing a number of forcing moves against the white group on the left. Up to 27, Black's group has also gained access to the center and the action shifts to the lower right corner where White makes an approach move against the marked black stone with 28. Black ignores this move and jumps out into the center with 29, aiming to launch an attack on the three white stones on the left. White presses his advantage in the lower right corner by attaching against the marked stone with 30.

Figure 3. Another joseki is played out in the lower right corner. With the moves to 38, Black gets territory at the bottom and White gets territory on the lower right side.

Next, Black launches an attack on the white stones at the bottom left. When White plays 52, his stones are out in the open, so they are in no danger of being captured.

With 58, White reinforces his stone at the top left, and Black makes two strategic extensions with 59 and 61.

White 62 is an approach move against the stone on the 4–4 point, but it is also an invasion because of the presence of the stone at 59. Before answering, however, Black plays 63 to see how White will respond.

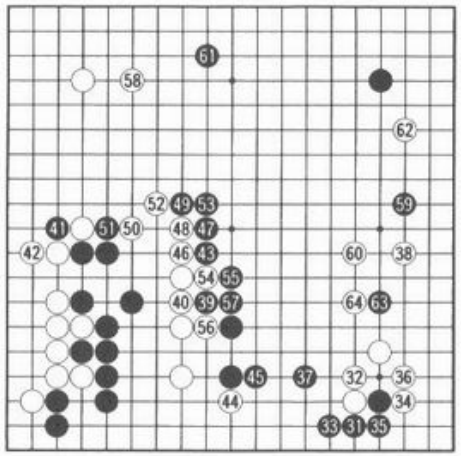


Figure 3 (31-64)

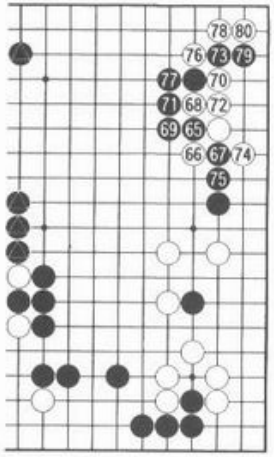


Figure 4 (65–80)

Figure 4. In this figure another joseki is played out in the top right corner. White gets about 14 points of territory while Black gets a wall facing the outside. This wall cannot be counted as territory, but it strategically links up with the marked black stone at the top left and the three marked stones in the center.

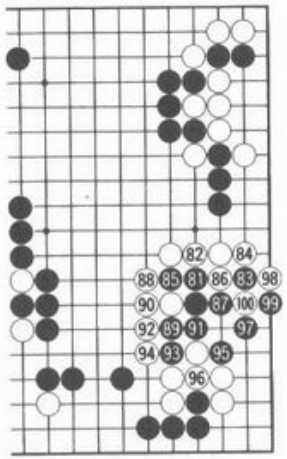


Figure 5 (81–100)

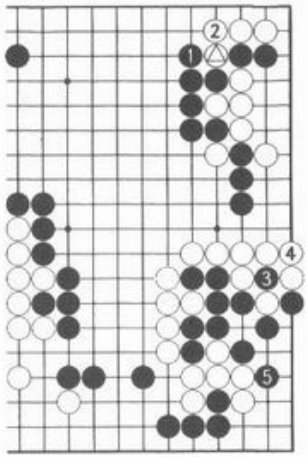


Figure 6 (101–105)
Black 1 = Black 101

Figure 5. Black next shifts to the lower right. His aim is to devastate White's territory there. If he can accomplish this, he will take the lead, but it is not so simple. When White captures with 100, it becomes a ko, a ko Black must win in order to live.

Figure 6. Black makes the first ko threat with 1 (Black 1 = Black 101). If Black can capture the marked stone, the white stones in the top right corner will die, so White connects with 2. Now Black can recapture with 3.

White retreats by connecting with 4 and Black expands his eye-making space with 5.

Figure 7. The ko fight continues with the capture at 6. When White plays 10, Black ends the ko by connecting with 11, but another ko arises below it when White plays 14. Black makes a ko threat with 15 and White answers with 16.

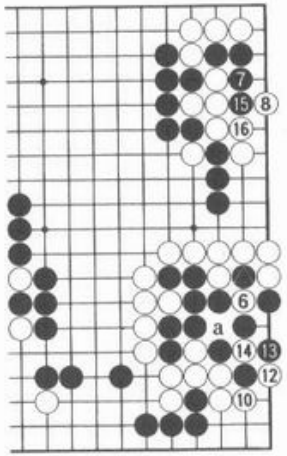


Figure 7 (106–116)
9: at △; 11: at 6

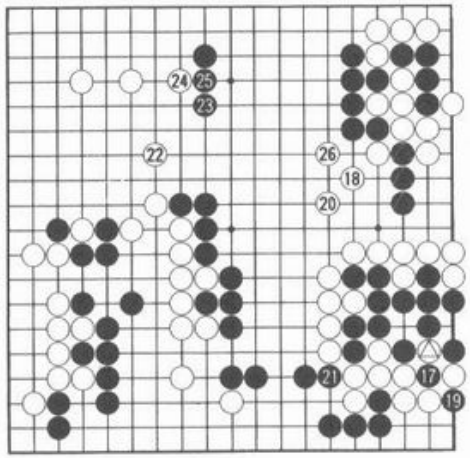


Figure 8 (117–126)

Figure 8. Black takes the ko with 17. White makes a ko threat with 18, threatening to catch the three marked stones and all the territory on the central right side, but Black ignores it and ends the ko by capturing with 19. White 20 secures the central right side as his territory and Black 21 catches seven white stones. If you count the white territory on the upper right side, you will see that White has a bit more than 30 points. Black has about the same in the lower right corner.

Black maps out a sphere of influence at the top with 23 and 25, but White 26 limits the amount of territory Black can get there.

Figure 9. This figure involves a skirmish around the black group on the left. White threatens this group in such a way so that he can expand his own territory at the same time. Finally, when Black plays 51, his group is safe.

With 52, White goes into the lead. This move not only destroys the black territory at the top, but also threatens to capture the six black stones to the right by playing at 'a'.

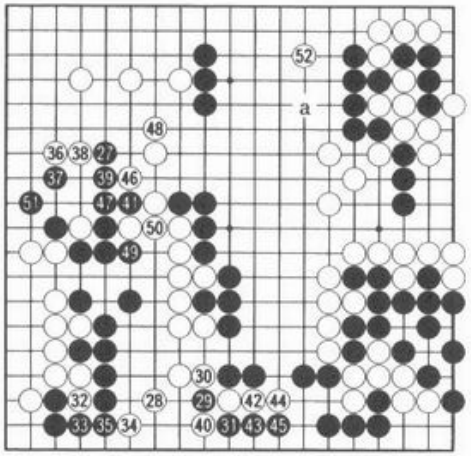


Figure 9 (127–152)

Figure 10. With the moves to 59, Black pulls his six threatened stones out into the open and keeps White confined to the top. White eventually loses these stones (do you see that after Black 77, the four white stones are dead as they stand?), but in exchange he has taken the territory in the top left (around Black 63).

After White 82, Black is behind and he has to do something to catch up. The only place there is to make more territory is in the center; he does this in the next figure.

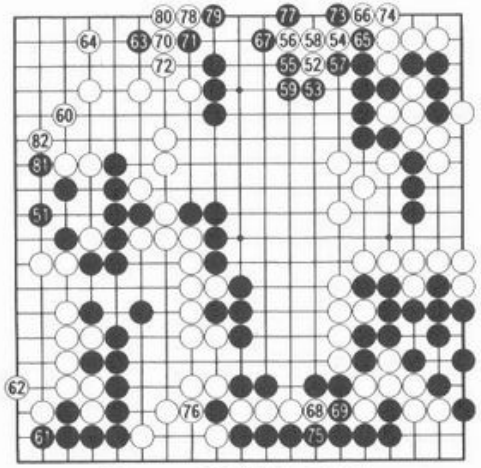


Figure 10 (153–182)

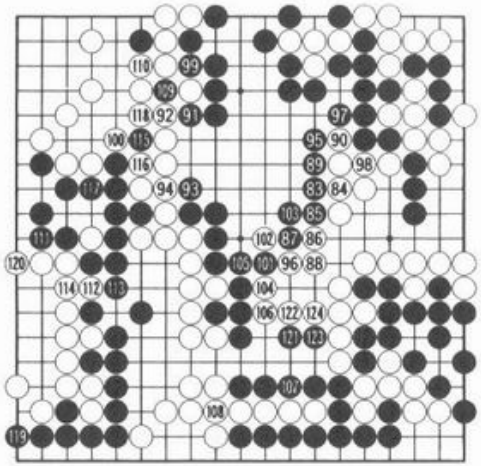


Figure 11 (183–224)

Figure 11. Black makes a big territory in the center with the moves from 83 to 105. After this, there are only small endgame moves left to be played. When White played 224, Kato resigned. He calculated that the score was about even on the board, but when the 5 1/2 points he gave up before the start of the game was taken into account, he knew that he could never catch up.

Continuing Your Study of Go

Go is a game that will bring you continual pleasure, and the stronger you become the more you will enjoy it.

If you want to become strong it is important to find opponents to play with. Fortunately, go is now played all over the world and you should be able to find a go club in your community. It is also possible to play go on the Internet. By joining the news group <rec.games.go> you should be able to get all the information you need to start playing go there. At the back of this book you will find a list of national go associations. Writing or calling one of these organizations should enable you to make contact with a go club near you.

You might want to play your very first games against a computer. There are a number of products available. The one we recommend is the program called 'Goliath', which is available from Schaak en Gowinkel het Paard in Europe and Kiseido in North America. Their addresses are on page 135.

When you find other people to play with, as a beginner you should play a number of games on a 9x9 board until you are completely familiar with the rules and the method of counting the score. After that you might want to play a few games on a 13x13 board before finally graduating to the 19x19 board. Playing games on the smaller boards is the quickest way to learn because you can acquire a lot of experience over many games in a short period of time.

Experience is very important for becoming a strong player, but you will make even faster gains if you also study go from the many books that are available from Kiseido Publishing Company. Among the first books that you should study are the four-volume series *Graded Go Problems for Beginners*. This series contains nearly 1500 problems which will thoroughly drill you in the basic tactics of the game. We recommend that you study the first volume

concurrently with this book. There are a number of other books that you should also study after completing this book. Below are our recommendations for your first year of study.

In the Beginning (Volume 1 of the Elementary Go Series)
Get Strong at the Opening (Vol. 1 of the Get Strong at Go Series)

From these two books you will learn opening strategy ('fuseki' in Japanese). *In the Beginning* will give you the theory, while *Get Strong at Fuseki* is a practical problem book which will help you master, move by move, the most common opening patterns.

Tesuji (Volume 3 of the Elementary Go Series)
Get Strong at Tesuji (Volume 6 of the Get Strong at Go Series)

Tesujis are the tactics of infighting and this is an important aspect of the game that you must master if you are going to become a strong player. Both books are highly recommended, especially *Get Strong at Tesuji*, which contains 534 elementary problems of every type of tesuji. Once you have finished this book, you will notice a remarkable increase in your go strength.

Life and Death (Volume 4 of the Elementary Go Series)
Get Strong at Life and Death (Volume 8 of the Get Strong at Go Series)

Along with tesujis, solving life-and-death problems is a good way to improve your tactical ability. In these two books, you will find more than 500 examples and problems that will train you to kill your opponent's stones and make your own live.

Get Strong at Handicap Go (Volume 9 of the Get Strong at Go Series)
Kage's Secret Chronicles of Handicap Go
Handicap Go (Volume 7 of the Elementary Series)

During your first year as a go player, a large number of your games will be played with a handicap. A good way to master go strategy is by studying handicap go. *Kage's Secret Chronicles of Handicap Go* will teach you the correct way to play handicap go, while the problems in *Get Strong at Handicap Go* will help you master handicap strategy from 9- to 2-stone handicaps.

Get Strong at Invading (Volume 5 of the Get Strong at Go Series)

Get Strong at Invading shows will show you how to invade the territorial frameworks that your opponent has built up in the opening. You will also learn to defend against these invasions.

Get Strong at the Endgame (Volume 7 of the Get Strong at Go Series)

The endgame is an important part of the game to master, and it is one area that many players tend to neglect. But you will never become a really strong player unless you study this part of the game. *Get Strong at the Endgame* contains 291 problems involving endgame tesujis, calculations, and practical problems that integrate different endgame techniques in one position.

Get Strong at Joseki (Volumes 2 to 4 of the Get Strong at Go Series)

Josekis are an important part of go to study. When studying josekis, you will learn many examples of tesujis and good style that can be applied not only in the opening but also in middle game.

Go World

Finally, the study of games — your own and those of top-ranking players — will be of great value in improving your go. By studying your own games, with the help of stronger players, you will be able to pinpoint your blind spots and weak points. And from the study of master games, you will get new ideas and learn many techniques that you can incorporate into your own games. In this way you will naturally develop good style and intuition.

A subscription to the quarterly magazine *Go World* will give you the top tournament games played in China, Korea and Japan.

In the book list that follows this section, you will find many other books covering every aspect of go.

Go Books from Kiseido

Get Strong at Go Series

A series of problem books covering every phase of the game from the opening to the endgame. Each book contains 170 or more problems ranging in difficulty from elementary to advanced. Thus, they can be used by players ranging in strength from 20-kyu to dan-level. By studying go in this problem format, you will not only learn basic principles as to why moves are made but also train yourself in thinking through and analyzing positions. You will encounter a great many of the same or similar patterns that will arise in your own games. We guarantee that diligent study of this entire series will lay the foundation for becoming a truly strong player.

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K53: Volume 3: **Get Strong at Joseki II**
K54: Volume 4: **Get Strong at Joseki III**
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K56: Volume 6: **Get Strong at Tesuji**
K57: Volume 7: **Get Strong at the Endgame**
K58: Volume 8: **Get Strong at Life and Death**
K59: Volume 9: **Get Strong at Handicap Go**
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Introductory and General

K50: **Go — A Complete Introduction to the Game**, by Cho Chikun
K40: **The Go Player's Almanac 2001**, edited by Richard Bozulich

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K46: Volumes 1, Introductory Problems (35-kyu to 25-kyu)
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K46: Volumes 4, Advanced Problems (6-kyu to 2-kyu)

Elementary Go Series

For more than 20 years, the Elementary Go Series has been the standard texts for go players who want to get a firm grasp of the fundamental of go. Not only is the theory of go elaborated on, the reader is also given problems to show how these theoretical concepts are applied in actual games.

K10: Volume 1: **In the Beginning — The opening in the Game of Go** by Ishigure Ikuro
K11: Volume 2: **38 Basic Joseki**, by Kosugi Kiyoshi and James Davies
K12: Volume 3: **Tesuji**, by James Davies
K13: Volume 4: **Life and Death**, by James Davies
K14: Volume 5: **Attack and Defense**, by Ishida Akira and James Davies
K15: Volume 6: **The Endgame**, by Ogawa Tomoko and James Davies
K16: Volume 7: **Handicap Go**, by Nagahara Yoshiaki and Richard Bozulich

Mastering the Basics Series

A series of books especially written for high-kyu players for mastering the basic techniques of go. Each book in this series consists of hundreds of problems designed to hammer home the fundamental concepts of go theory and technique. A thorough and patient study of this series is the fastest way to go through the kyu ranks and become a dan-level player.

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K02: **Basic Techniques of Go**, by Nagahara Yoshiaki and Haruyama Isamu
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K45: **Positional Judgment — High-Speed Game Analysis**, by Cho Chikun
K69: **Cosmic Go — A Guide to Four-Stone Handicap Games** By Sangit Chatterjee and Yang Huiren

Advanced Books

Dictionary of Basic Josekis, by Ishida Yoshio
K21: Volume 1 — 3–4 Point Josekis
K22: Volume 2 — 3–5 Point Josekis
K23: Volume 3 — 5–4 and 4–4 Point Josekis
K29: **Reducing Territorial Frameworks**. by Fujisawa Shuko

Game Collections

K01: **Invincible: The Games of Shusaku**, edited and compiled by John Power
K07: **The 1971 Honinbo Tournament**, by Iwamoto Kaoru
K25: **Appreciating Famous Games**, by Ohira Shuzo
PP01: **Tournament Go 1992**, edited and compiled by John Power

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A quarterly magazine covering the Chinese, Korean and Japanese tournament scene. Instructional articles for beginners to advanced players.

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Tel: 1-800-988-6463; FAX 1-310-578-7381;
e-mail: sales@kiseido.com ***http:/www.kiseido.com***

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Go Associations Around the World

This list of national go associations was compiled in August 1997 and, as far as we know, is accurate and complete. Addresses often change, so if you have trouble contacting a go association, please write to Kiseido and we may be able to give you a local contact.

American Go Association
c/o Mr. Philip Straus, President
228 S. 21st Street, Philadelphia, PA 19103, USA; Tel: 1-215-568-0595

Argentine Go Association
c/o Mr. Hugo Scolnik, President
011 eros 1656-15A, (1426) Buenos Aires, Argentina; Tel: 54-1-3132700

Australian Go Association
Mr. Neville Smythe, Secretary
GPO Box 65, Camberra, ACT, 2601 Australia; Tel: 61-6-249-2709; 61-6-273-3108

Austrian Go Federation
Rechte Bahngasse 28/2, A-1030 Wien, Austria; Tel. 43-1-326261

La Federation Belge do Go
Jan Mulsstraat 110, B-1853 Strombeek-Bever, Belgium; Tel. 32-2-267-9897

Nihon Ki-in Do Brasil
s/c Ltda Praca Arquimedes Da Silva, No. 116, Sao Paulo, Brazil; Tel. 55-11-571-2847

Canadian Go Association
c/o Mr. David Erbach, President
71 Brixford Crescent, Winnipeg, Manitoba R2N 1E1 Canada; Tel. 1-204-256-2537

Chile Go Association
c/o Mr. Jiro Maeda, Embassy of Japan
Casilla 124, Correo 35, Santiago, Chile; Tel. 56-2-232-1807

Chinese Weiqi Association
c/o China Qi Yuan, 80, Tian Tan Dong Road, Beijing; Tel. 86-10-6711-4680

Chinese Taipei Wei-ch'i Association
4th Fl., Kuang-Fu Bldg., No. 35 Kuang Fu Road, Taipei, Taiwan;
Tel. 886-2-761-4117; or 761-4119

Czech Go Association
Ceruv vrsek 4, CZ 18000 Praha 8, Czech; Tel. 42-2-684-2781

Federacion Cubana de Go
c/o Mr. Rafael Alberto Torres Miranda, President, Calle 110 No. 304 Apto. 4e/3ray 3ra A. Miramar, Ciudaddela Habana, Cuba; Tel. 53-7-33-1715;

Danish Go Association
Mr. Frank Hansen, President
Mikkelborg alle 8, Dk-2980 Kokkedal, Denmark; Tel: 45-42-86-3481

British Go Association
c/o Mr. Alex Rix, President
6 Meynell Crescent, Hackney, London E9 7AS, England; Tel: 181-533-0899

Finnish Go Association
c/o Matti Siivola. Rautkalliontie 4B 24, FI-01360 Vantaa, Finland; Tel: 358-0-8744283

Federation Francaise de Go
B.P. 95, F-75262 Paris, Cedex 06, France; Tel: 33-1-3956-3904

Deutscher Go Bund
c/o Mr. Winfried Dorholt, President
Wittenberger Str. 45, C-30179 Hannover 1, Germany; Tel: 49-511-603970

Hong Kong Go Club
501 Nathan Road, 9th Flr., Kowloon, Hong Kong; Tel: 852-2385-7728; 2782-2652

Hungary Go Association
c/o Mr. Akos Szirmai, Secretary
Vag u. 2/b H-1133 Budapest, Hungary; Tel: 36-1-1400450

Persatuan Igo Indonesia
c/o Mr. Woei-Haw Djap
JI Latumeten, Gg Sariputra No. 29, Jakarta 11330, Indonesia; Tel: 62-21-6312162

Irish Go Association
c/o Mr. Noel Mitchell
Dodona Blackwood Lane, Malahide, Co. Dublin, Ireland; Tel: 353-1-8461-492

Federazione Italiano Giuoco Go
c/o Mr. Luciano Ghelli, President
Via Giannoni 6, 1-20154 Milano, Italy; Tel: 39-2-3310-5042

Korea Baduk Association
315, Hong Ik Dong, Seong Dong-ku, Seoul, Korea; Tel: 82-2-291-4001; 299-1294~5

Go Club de Luxembourg
c/o B. Zimmermann, 58, Bd General Patton, L-2316 Luxembourg; Tel: 35-2-43033597

Malaysia Go Association
Mr. Leong Kok-Hong, 982 Jalan Selesa 8, Taman Gembira, 58200 Kuala Lumpur, Malaysia; Tel: 60-3-391-9795; 60-3-781-4963

Asociacion Mexicana de Go
c/o Mr. Juan-Joses Rivaud, President
Hondonada #15, Mexico D.F.C.P. 14010 Mexico; Tel: 52-5-665-6853

Dutch Go Association
c/o European Go Cultural Centre
Schokland 14, NL-1181 HV Amstelveen, The Netherlands; Tel: 31-20-645-5555

New Zealand Go Society
c/o Mr. Michael Taler, President
76 Marsden Avenue, Mt. Eden, Auckland 1004 New Zealand; Tel: 64-9-620-9872

Norwegian Go Association
Mr. Dag Belsnes, Stabburfaret 12, N-1350 Lommedalen, Norway; Tel: 47-67-56-1054

The Go Club of the Philippines
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